

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTASXJ1617

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	3	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	4	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	5	APR 28	IMSRESEARCH reloaded with enhancements
NEWS	6	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS	7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS	8	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS	9	JUN 06	KOREAPAT updated with 41,000 documents
NEWS	10	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS	11	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS	12	JUN 25	CA/CAPLUS and USPAT databases updated with IPC reclassification data
NEWS	13	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS	14	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS	15	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS	16	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS	17	JUL 28	CA/CAPLUS patent coverage enhanced
NEWS	18	JUL 28	EPFULL enhanced with additional legal status information from the EPOLINE Register
NEWS	19	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS	20	JUL 28	STN Viewer performance improved
NEWS	21	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS	22	AUG 13	CA/CAPLUS enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS	23	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS	24	AUG 15	CAPLUS currency for Korean patents enhanced
NEWS	25	AUG 25	CA/CAPLUS, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS	26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS LOGIN      Welcome Banner and News Items  
NEWS IPC8        For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 15:55:23 ON 28 AUG 2008

=>

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 15:55:34 ON 28 AUG 2008

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 27 AUG 2008 HIGHEST RN 1044280-23-0  
DICTIONARY FILE UPDATES: 27 AUG 2008 HIGHEST RN 1044280-23-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

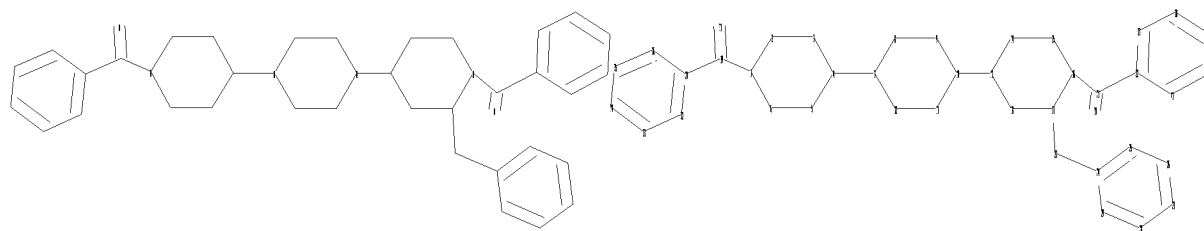
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10560476.str



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chain nodes :
19 21 23 30 31
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 22 24 25 26
27 28 29 32 33 34 35 36 37 38 39 40 41
chain bonds :
1-19 4-7 10-13 16-21 17-23 19-20 19-31 21-22 21-30 23-24
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18
14-15 15-16 16-17 17-18 20-32 20-36 22-37 22-41 24-25 24-29 25-26 26-27
27-28 28-29 32-33 33-34 34-35 35-36 37-38 38-39 39-40 40-41
exact/norm bonds :
1-2 1-6 1-19 2-3 3-4 4-5 4-7 5-6 7-8 7-12 8-9 9-10 10-11 10-13 11-12
13-14 13-18 14-15 15-16 16-17 16-21 17-18 19-31 21-30
exact bonds :
17-23 19-20 21-22 23-24
normalized bonds :
20-32 20-36 22-37 22-41 24-25 24-29 25-26 26-27 27-28 28-29 32-33 33-34
34-35 35-36 37-38 38-39 39-40 40-41

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Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS
20:Atom 21:CLASS 22:Atom 23:CLASS 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom 30:CLASS 31:CLASS 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom
38:Atom 39:Atom 40:Atom 41:Atom

```

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

FULL SEARCH INITIATED 15:56:20 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2867 TO ITERATE

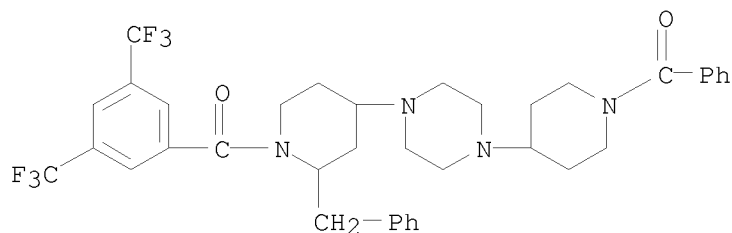
100.0% PROCESSED 2867 ITERATIONS  
SEARCH TIME: 00.00.01

46 ANSWERS

L2 46 SEA SSS FUL L1

=> d 12 1-46

L2 ANSWER 1 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 815579-75-0 REGISTRY  
ED Entered STN: 18 Jan 2005  
CN Methanone, [4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl][3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)- (9CI)  
MF C37 H40 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

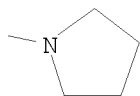
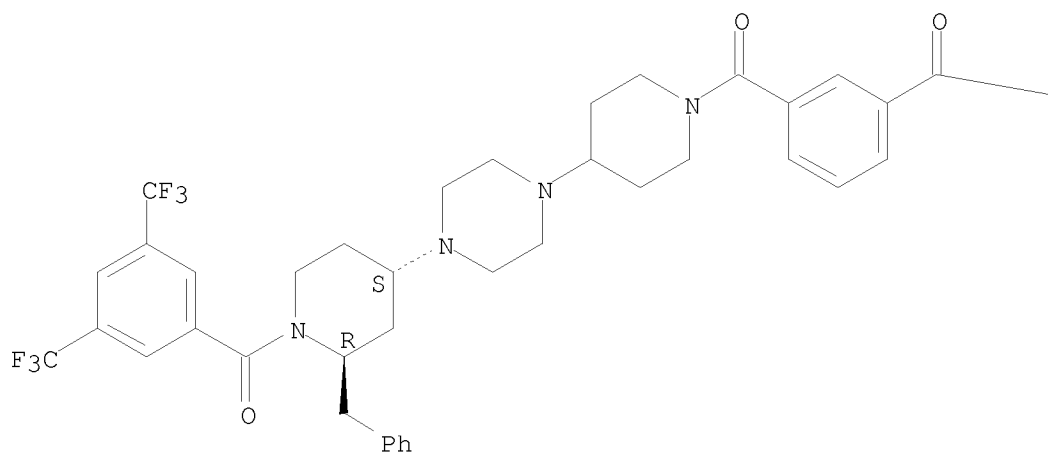


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 717137-60-5 REGISTRY  
ED Entered STN: 27 Jul 2004  
CN Methanone, [4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl][3-(1-pyrrolidinylcarbonyl)phenyl]- (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinylcarbonyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
FS STEREOSEARCH  
MF C42 H47 F6 N5 O3  
SR CA  
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

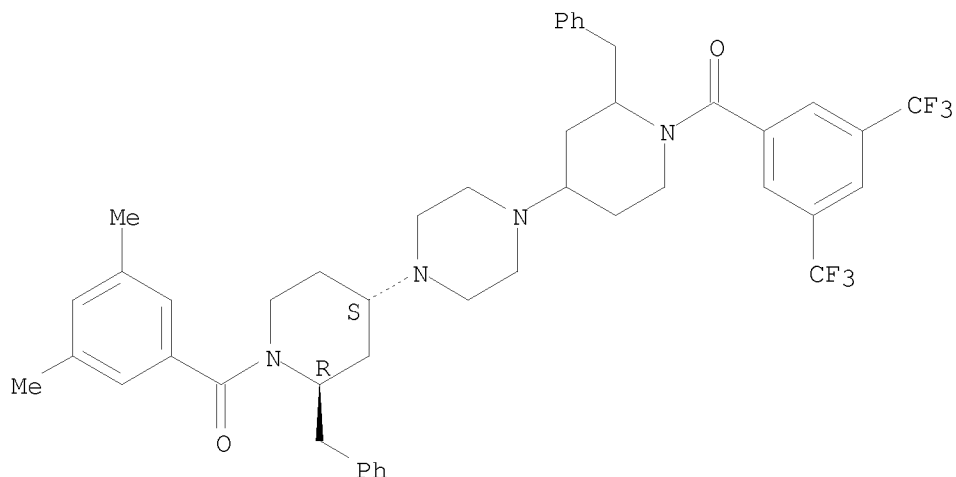


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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 717137-57-0 REGISTRY  
ED Entered STN: 27 Jul 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[(2R,4S)-1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, rel- (9CI) (CA INDEX NAME)  
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MF C46 H50 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS

Relative stereochemistry.

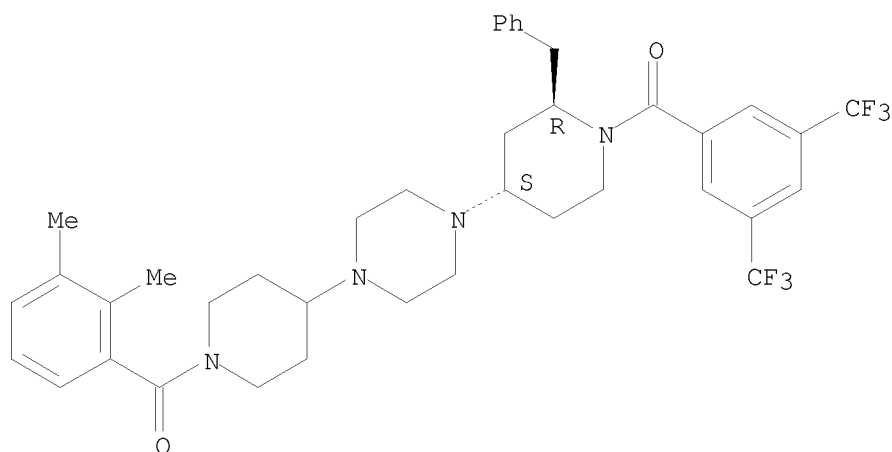


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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681291-82-7 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,3-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C39 H44 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry. Rotation (-).

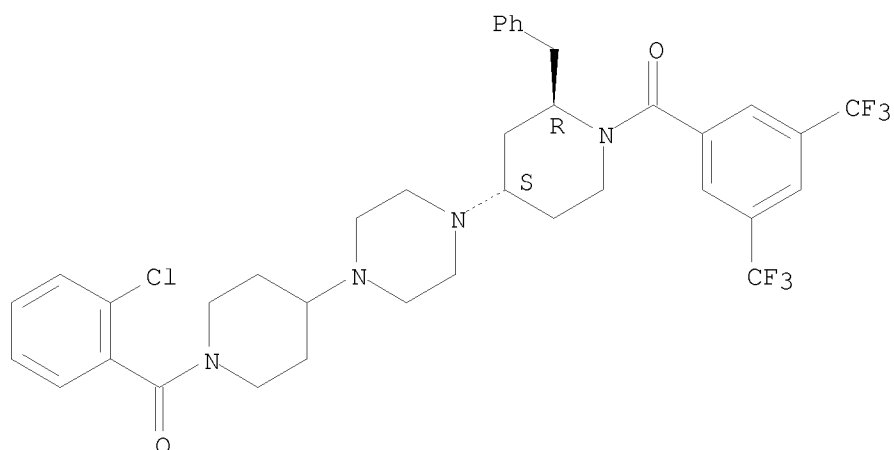


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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681291-77-0 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-chlorobenzoyl)-  
4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX  
NAME)  
FS STEREOSEARCH  
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LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry. Rotation (-).

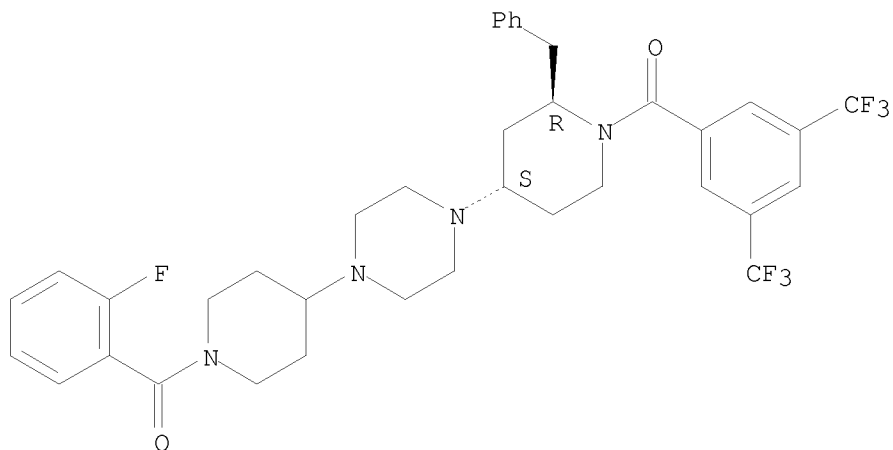


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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681291-76-9 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-fluorobenzoyl)-  
4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX  
NAME)  
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SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry. Rotation (-).

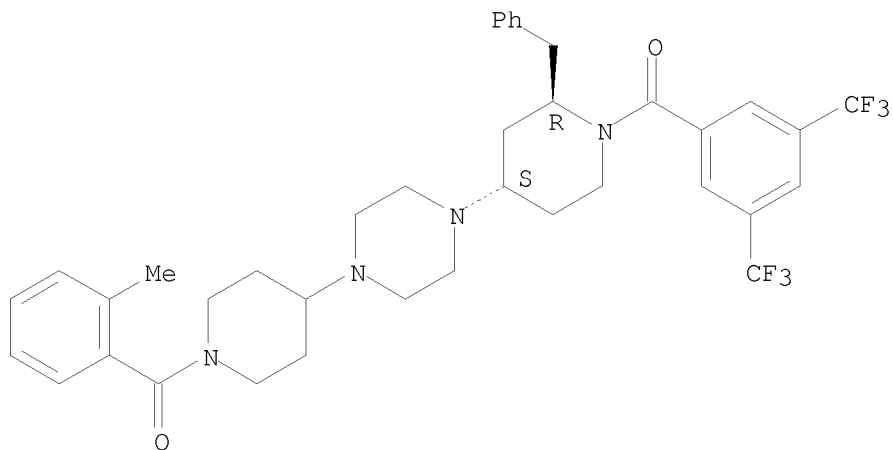


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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681291-75-8 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
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SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry. Rotation (-).

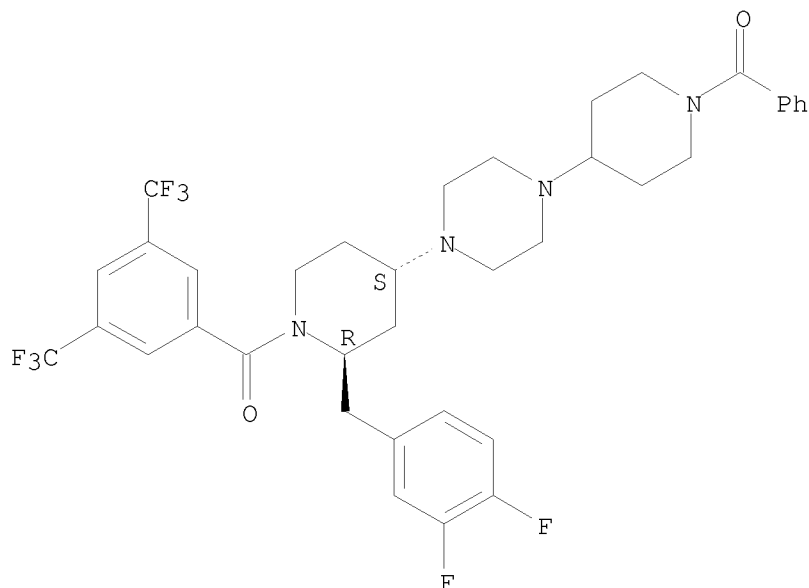


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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 8 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681291-69-0 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-[(3,4-difluorophenyl)methyl]-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
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 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

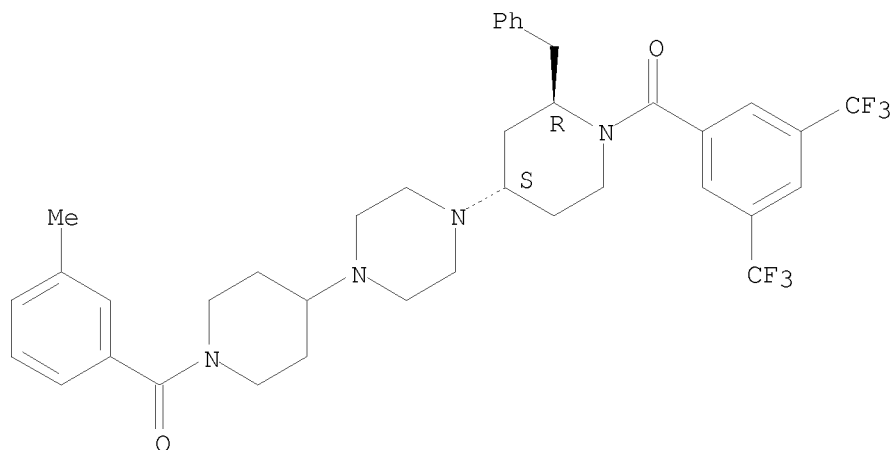


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L2 ANSWER 9 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681291-47-4 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, dihydrochloride, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C38 H42 F6 N4 O2 . 2 Cl H  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL  
 CRN (681290-63-1)

Absolute stereochemistry.

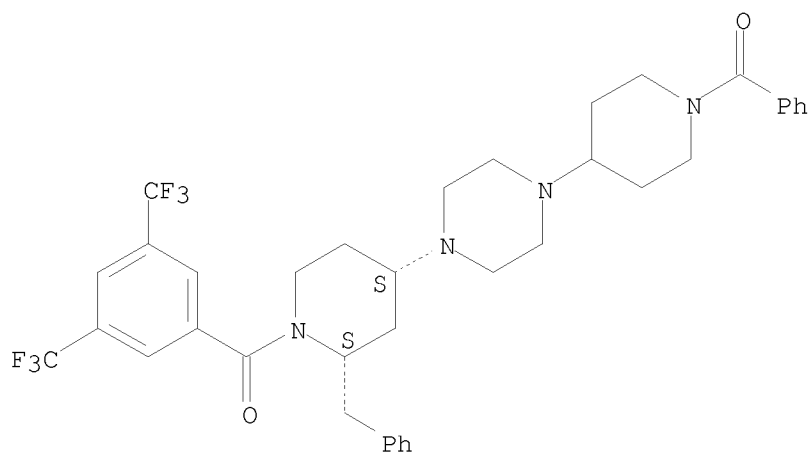


● 2 HCl

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 10 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681291-46-3 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4S)- (9CI) (CA INDEX NAME)  
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MF C37 H40 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

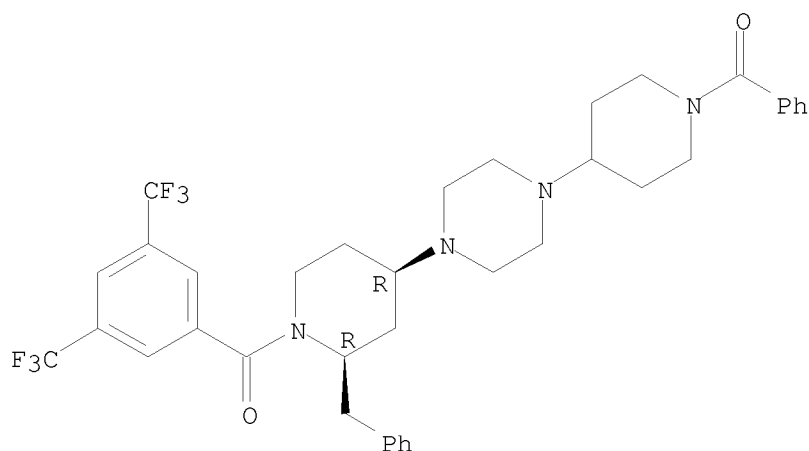


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L2 ANSWER 11 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681291-45-2 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4R)- (9CI) (CA INDEX NAME)  
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 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

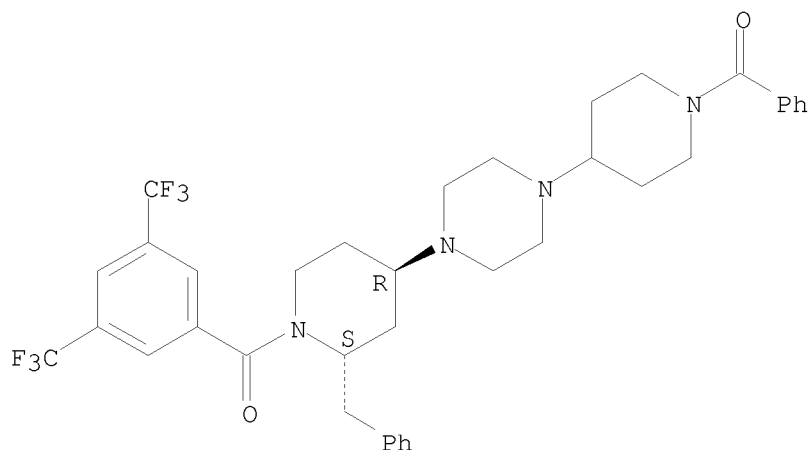


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L2 ANSWER 12 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681291-44-1 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4R)- (9CI) (CA INDEX NAME)  
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 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

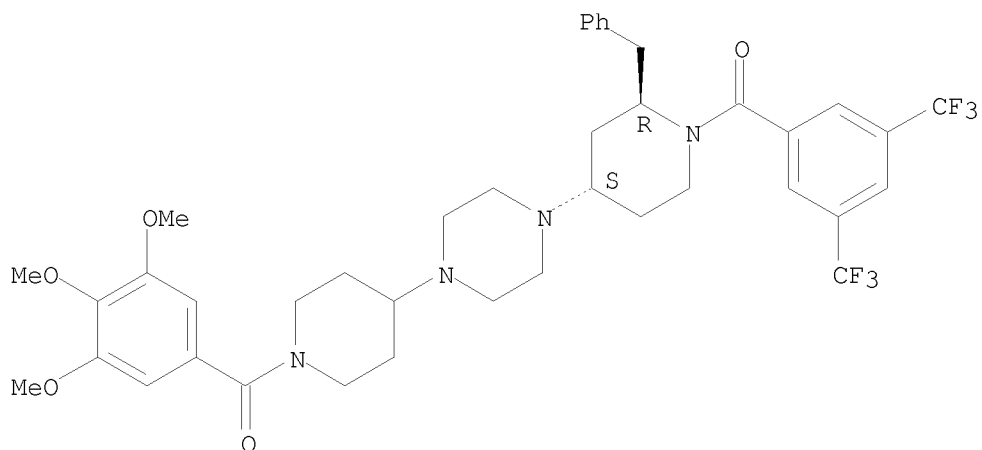


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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 13 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-87-9 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)  
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Absolute stereochemistry.

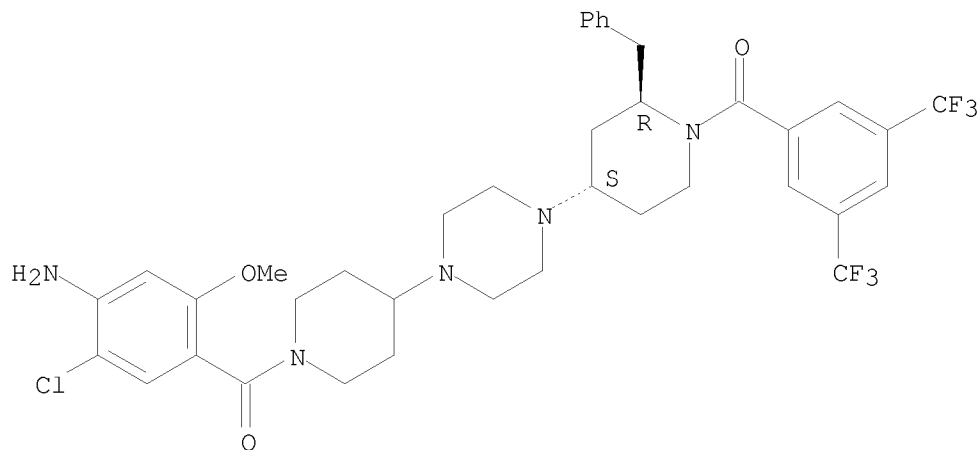


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3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 14 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-86-8 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 4-[4-[1-(4-amino-5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
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Absolute stereochemistry.

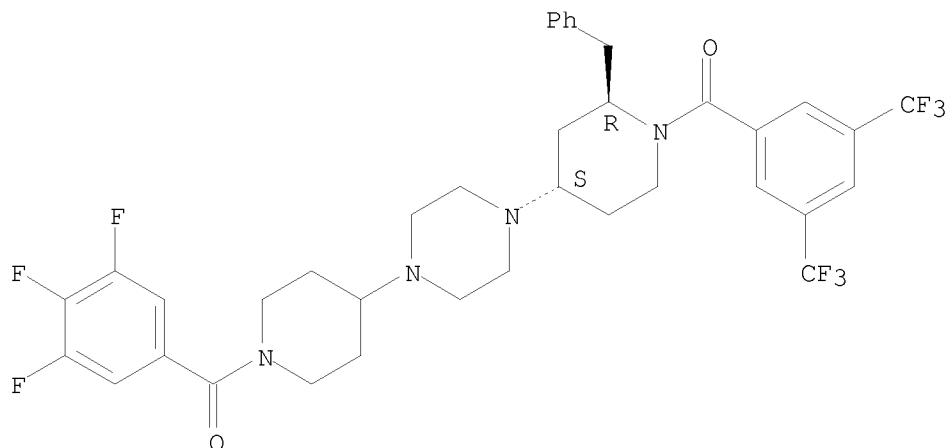


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 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 15 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-85-7 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)  
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Absolute stereochemistry.

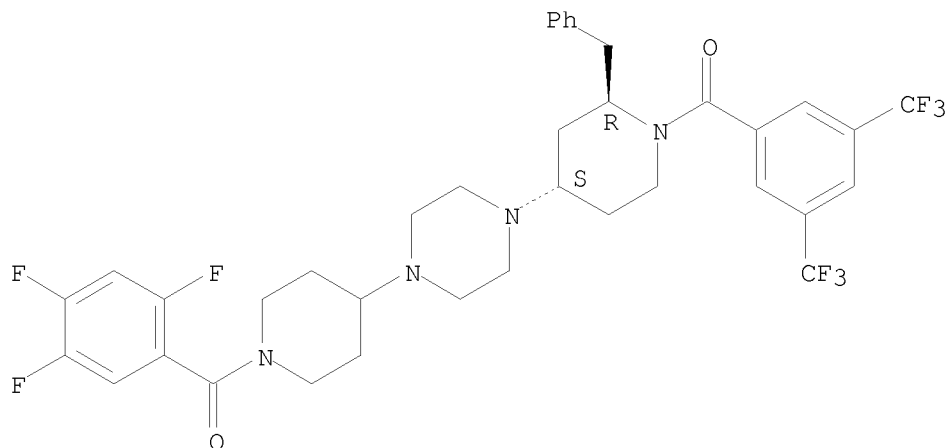


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 16 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-84-6 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(2,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)  
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SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

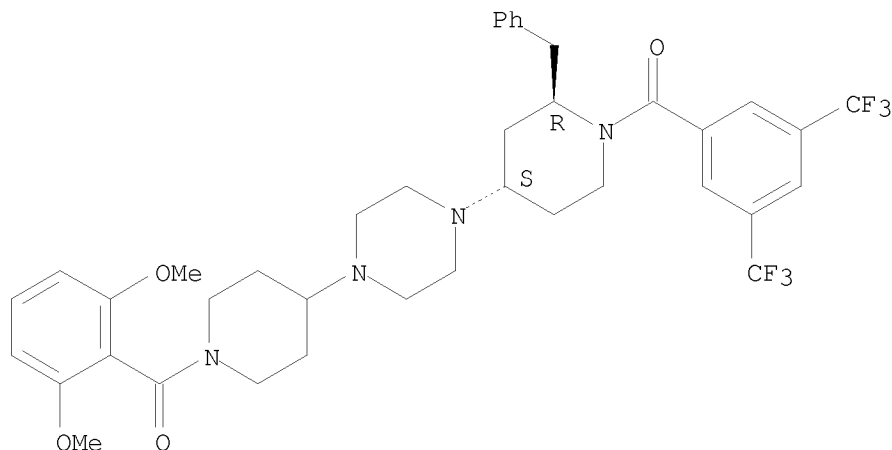


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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 RN 681290-83-5 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,6-dimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
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 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

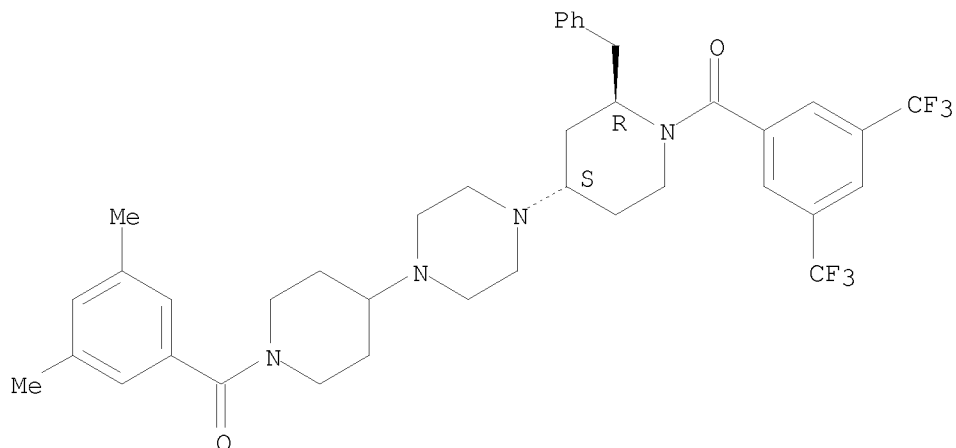


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2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 18 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-82-4 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)  
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 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Relative stereochemistry.

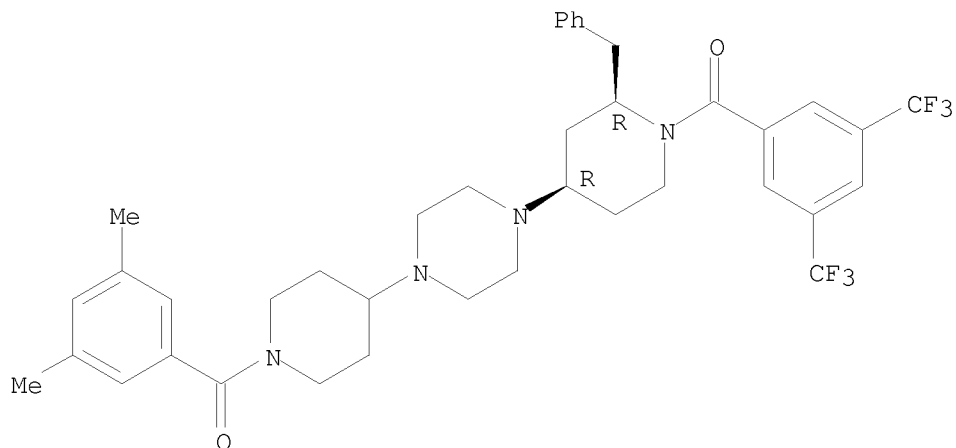


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 19 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-81-3 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4R)-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C39 H44 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

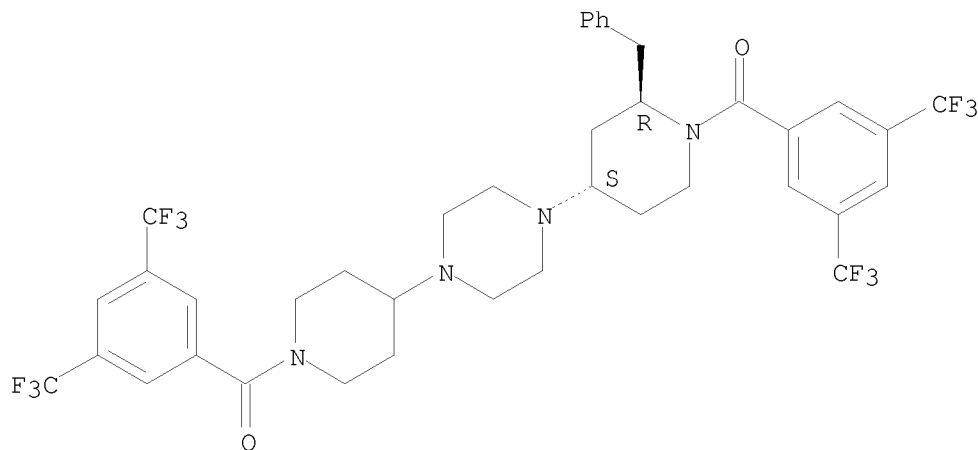


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 20 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-80-2 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[3,5-bis(trifluoromethyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C39 H38 F12 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Relative stereochemistry.

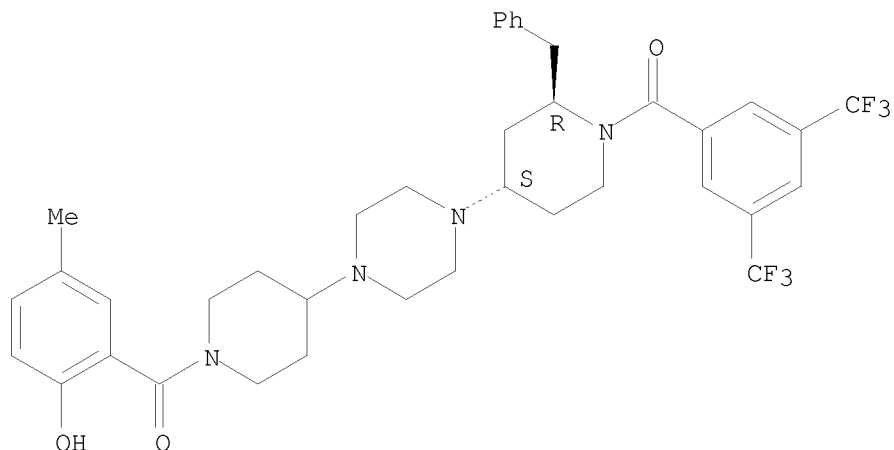


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 21 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-79-9 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxy-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C38 H42 F6 N4 O3  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

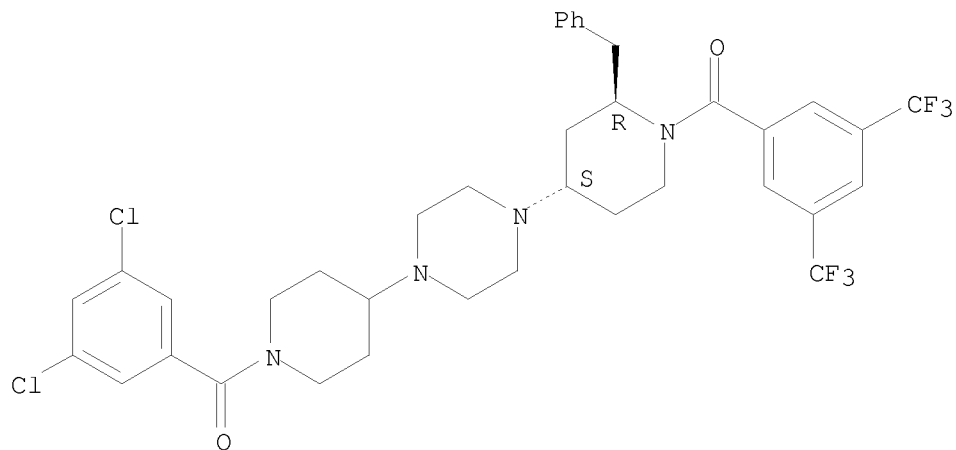


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 22 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-78-8 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dichlorobenzoyl)-4-piperidiny]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C37 H38 Cl2 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

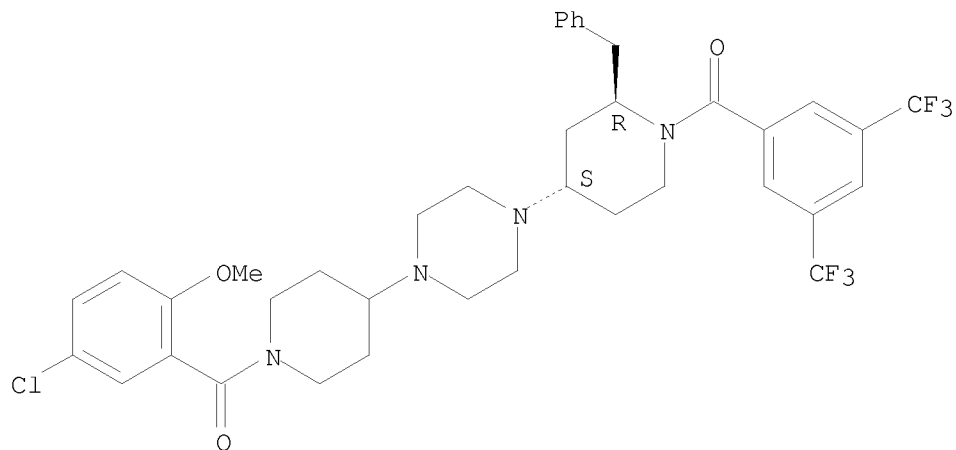


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 23 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-77-7 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C38 H41 Cl F6 N4 O3  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

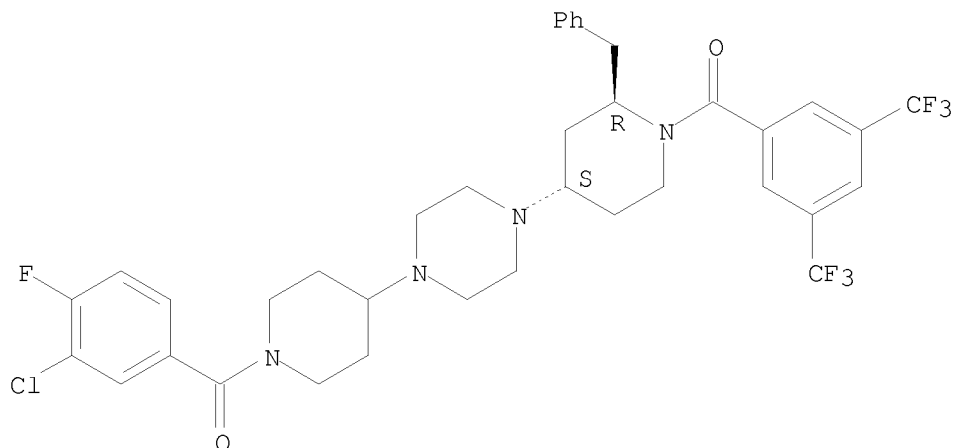


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 24 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-76-6 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chloro-4-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H38 Cl F7 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

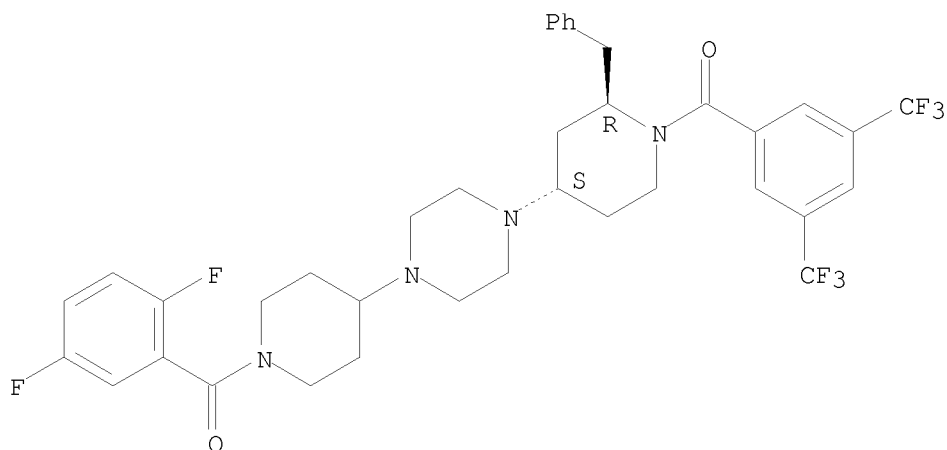


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 25 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-75-5 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C37 H38 F8 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

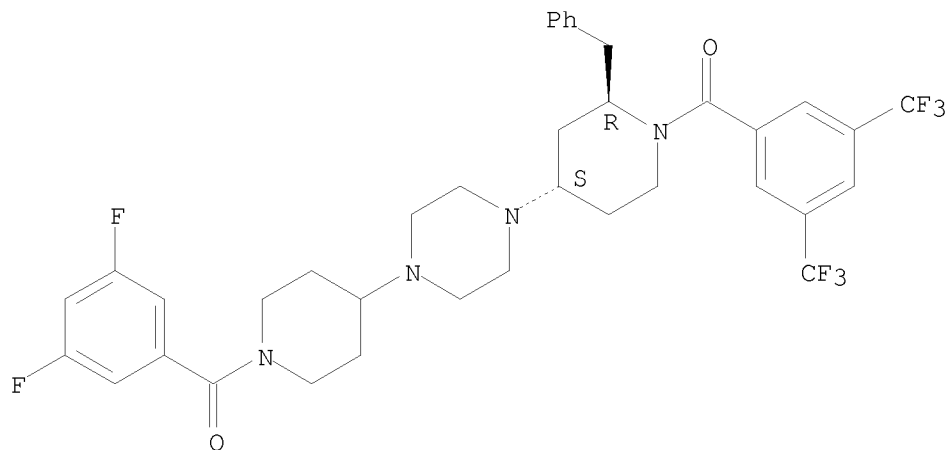


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 26 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-74-4 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H38 F8 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

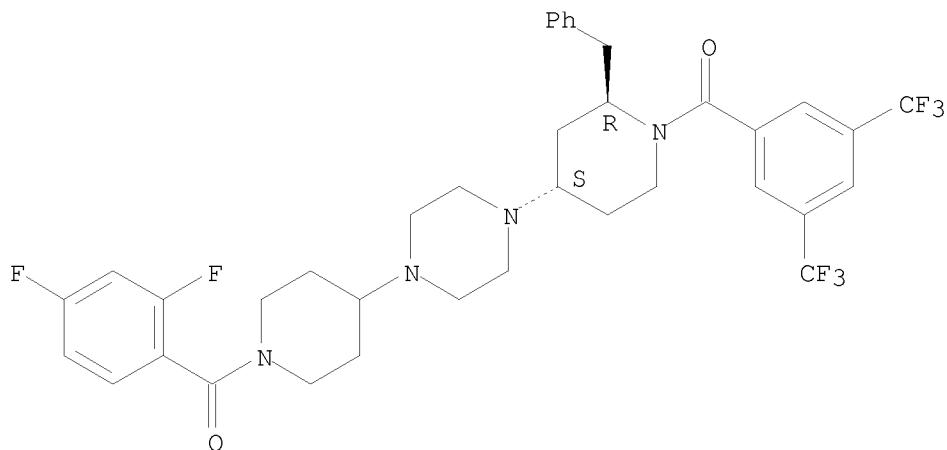


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 27 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-73-3 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,4-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H38 F8 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

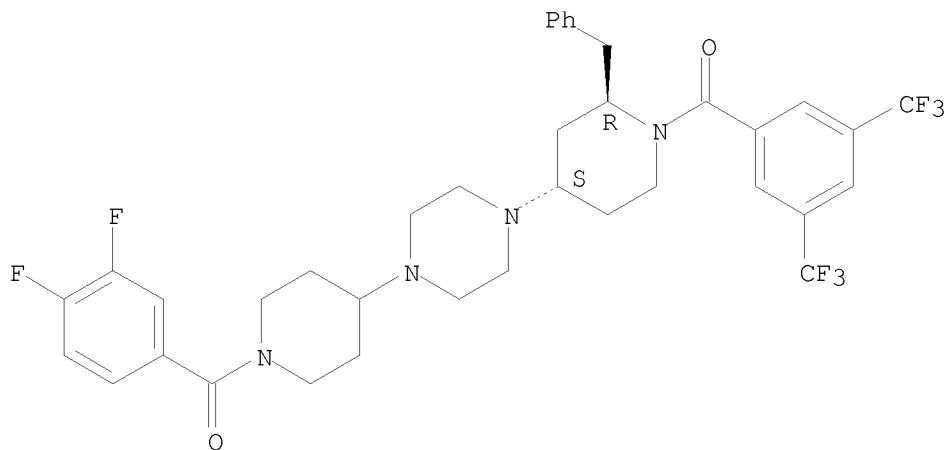


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 28 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-72-2 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,4-difluorobenzoyl)-4-piperidiny]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C37 H38 F8 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

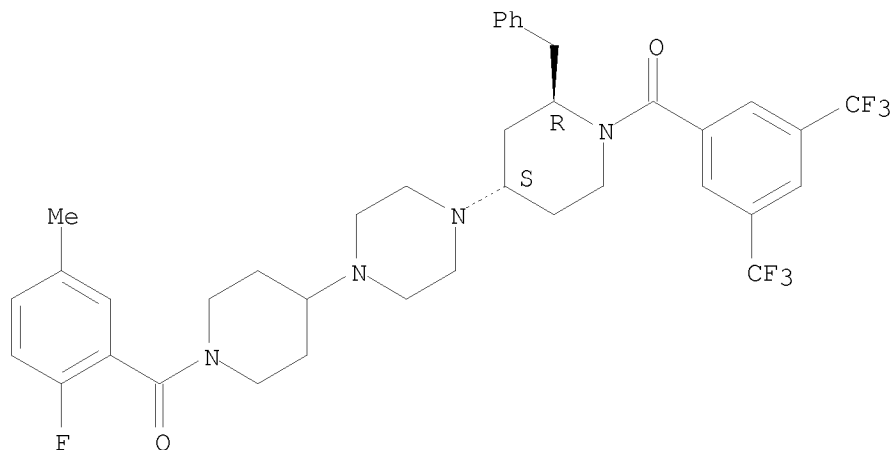


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 29 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-71-1 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-fluoro-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C38 H41 F7 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

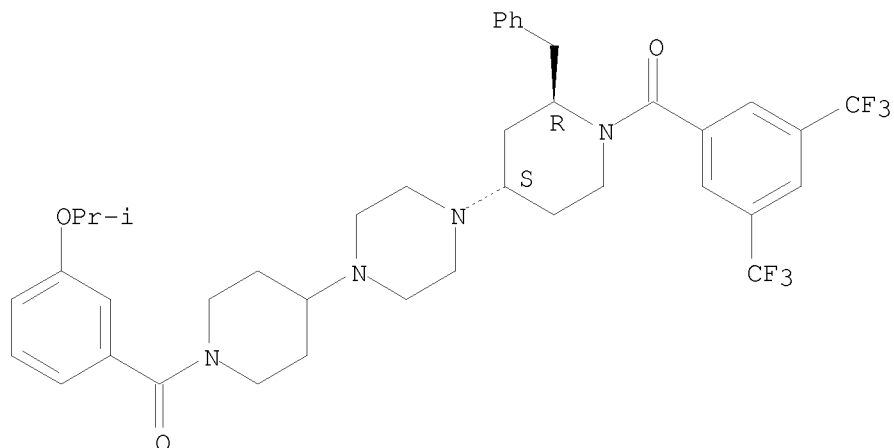


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 30 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-70-0 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[3-(1-methylethoxy)benzoyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C40 H46 F6 N4 O3  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Relative stereochemistry.

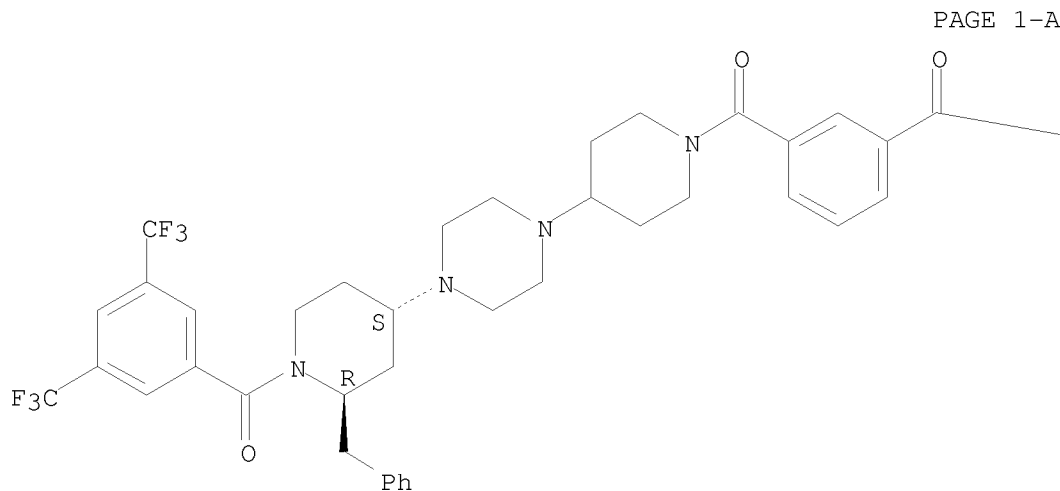


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 31 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-69-7 REGISTRY  
ED Entered STN: 12 May 2004  
CN Methanone, [4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl][3-(4-morpholinylcarbonyl)phenyl]- (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Morpholine, 4-[3-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]benzoyl]- (9CI)  
FS STEREOSEARCH  
MF C42 H47 F6 N5 O4  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

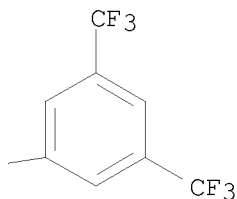
Absolute stereochemistry.



PAGE 1-A

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Absolute stereochemistry.

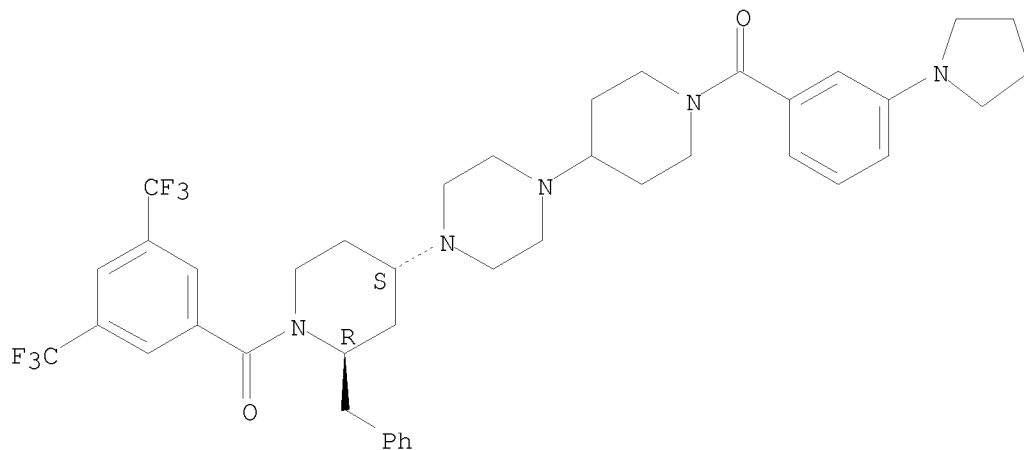


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 33 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-67-5 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)  
FS STEREOSEARCH  
MF C41 H47 F6 N5 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.



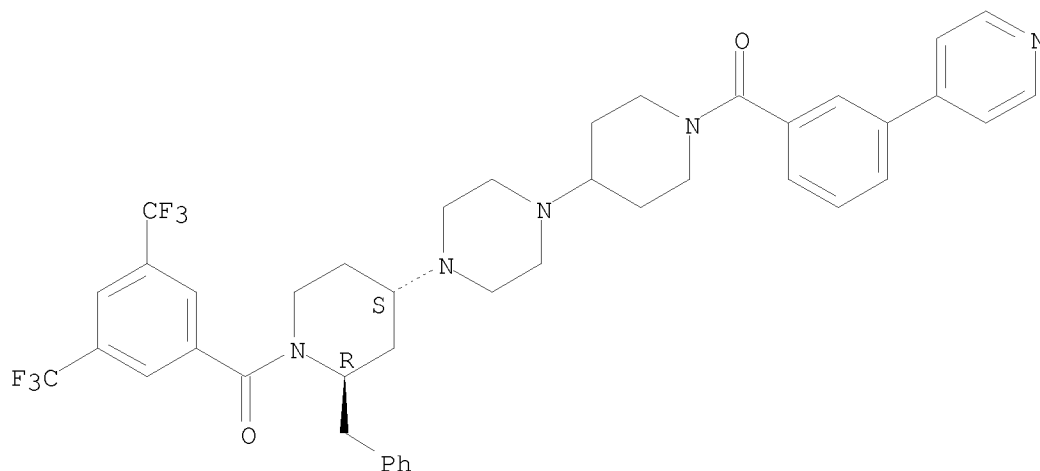
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 34 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN

RN 681290-66-4 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(4-pyridinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
 (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C42 H43 F6 N5 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

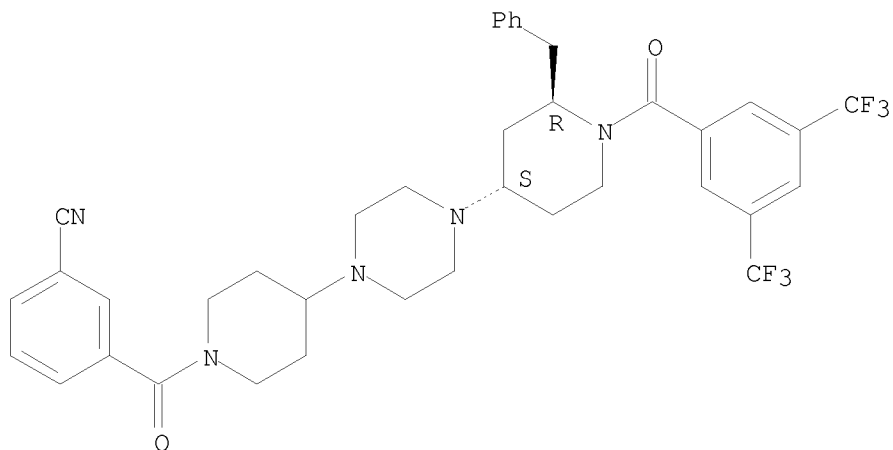


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 35 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-65-3 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Benzonitrile, 3-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]- (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-cyanobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI)  
 FS STEREOSEARCH  
 MF C38 H39 F6 N5 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

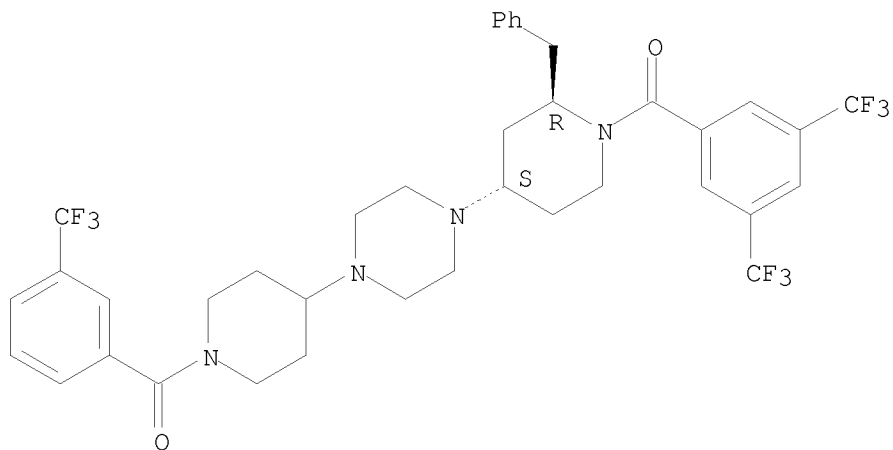


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 36 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-64-2 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(trifluoromethyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)-  
(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C38 H39 F9 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

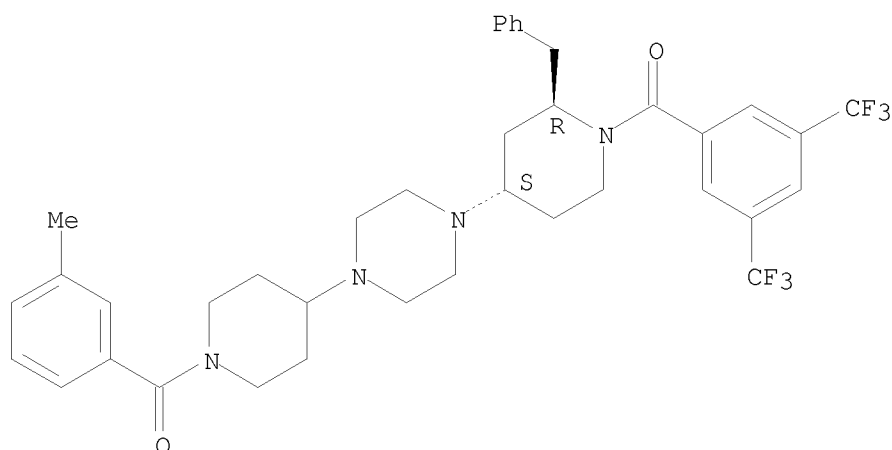


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 37 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-63-1 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C38 H42 F6 N4 O2  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

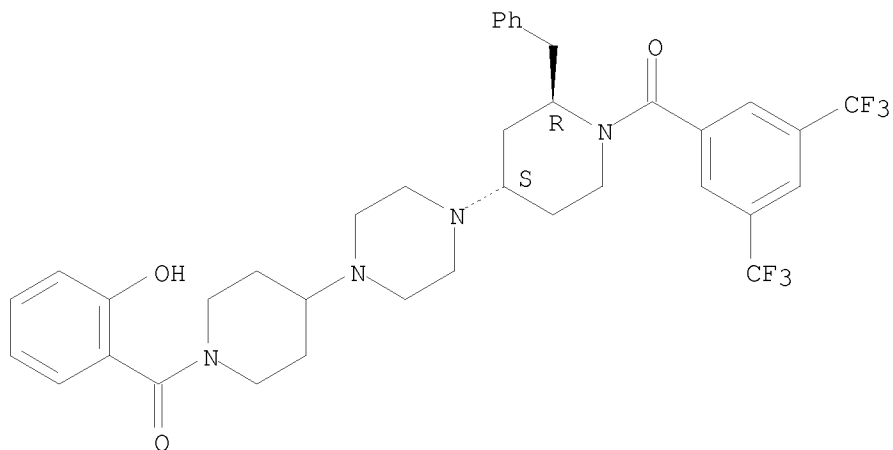


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 38 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-62-0 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H40 F6 N4 O3  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

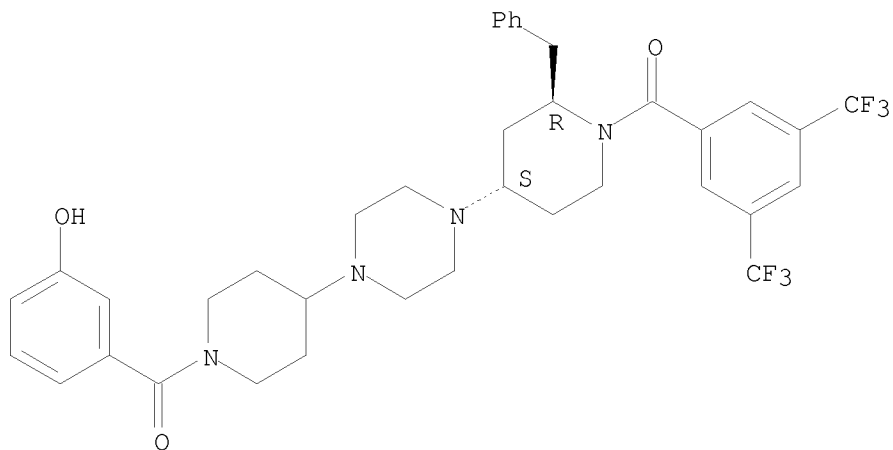


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 39 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-61-9 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C37 H40 F6 N4 O3  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

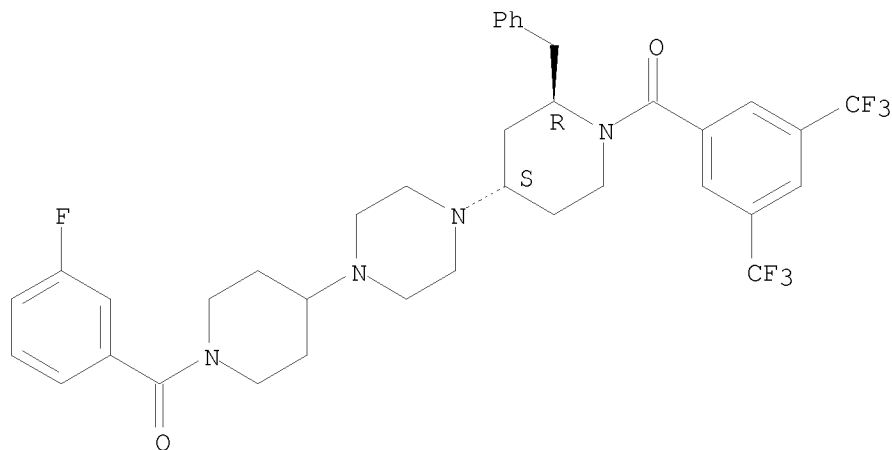


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 40 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-60-8 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H39 F7 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

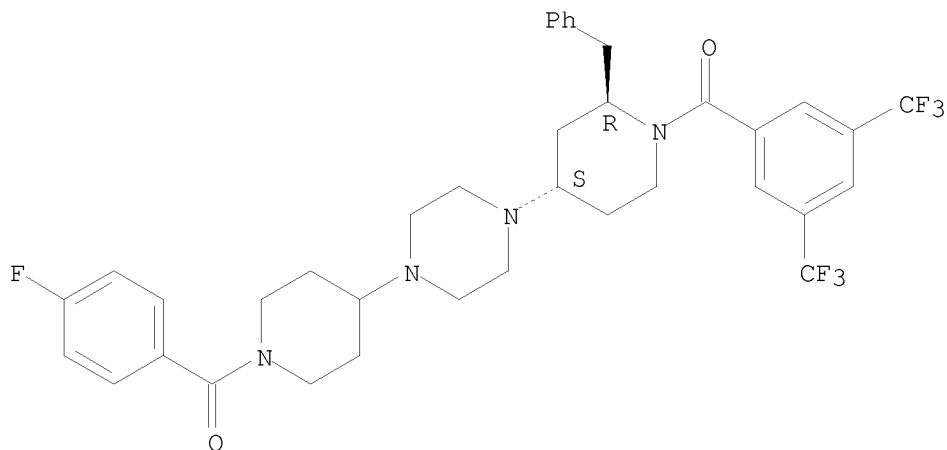


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 41 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-59-5 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(4-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H39 F7 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

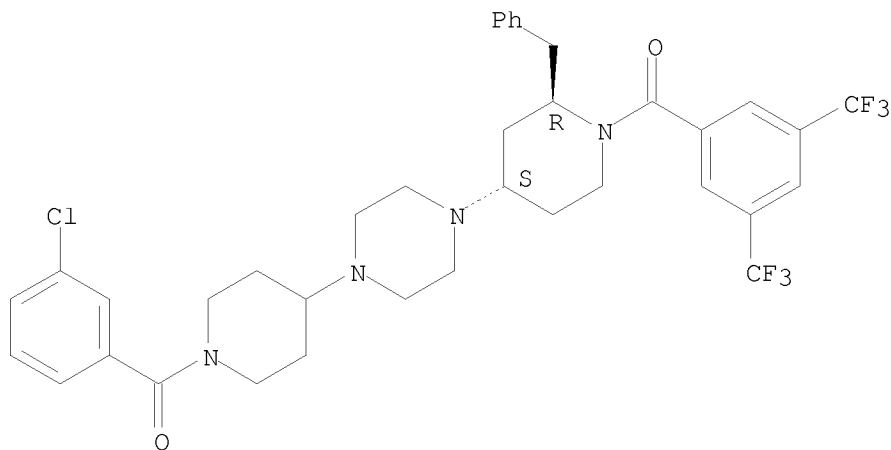


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 42 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-58-4 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C37 H39 Cl F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

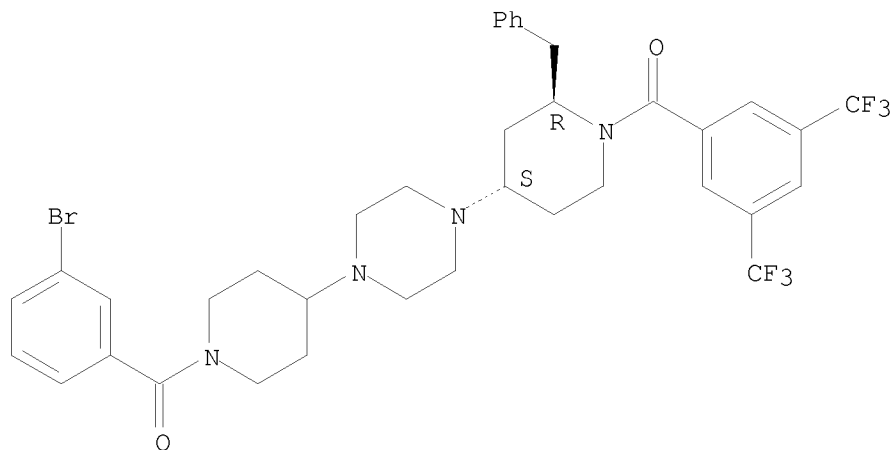


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 43 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-57-3 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-bromobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H39 Br F6 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.

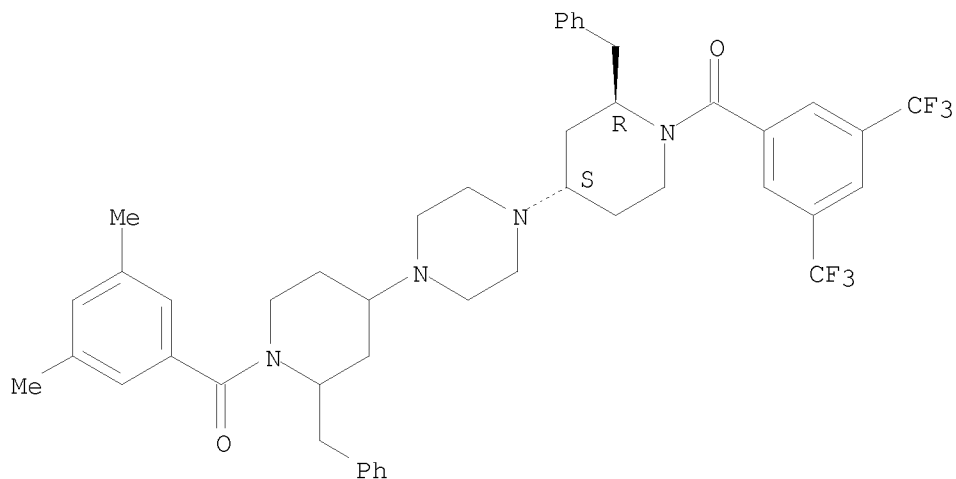


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 44 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-39-1 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C46 H50 F6 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Relative stereochemistry.

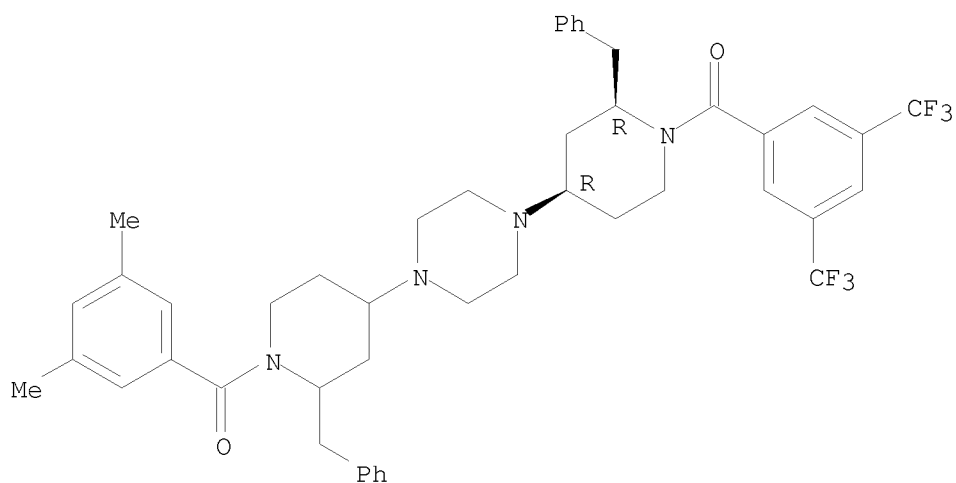


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 45 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 681290-38-0 REGISTRY  
ED Entered STN: 12 May 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4R)-rel- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C46 H50 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Relative stereochemistry.



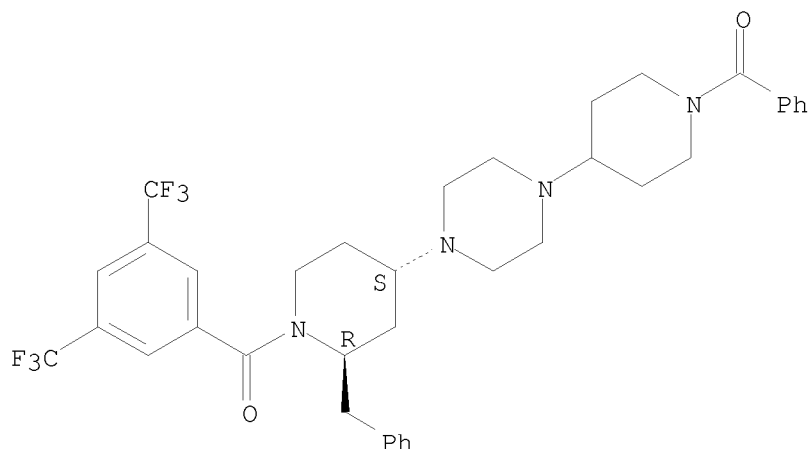
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 46 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 681290-31-3 REGISTRY  
 ED Entered STN: 12 May 2004  
 CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C37 H40 F6 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file hcaplus  
 COST IN U.S. DOLLARS  
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
273.58	273.79

FILE 'HCAPLUS' ENTERED AT 16:00:15 ON 28 AUG 2008  
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FILE LAST UPDATED: 27 Aug 2008 (20080827/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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=> s 12

L3 3 L2

=> d 12 ibib abs hitstr 1-3

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=> d 12

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

L2 ANSWER 1 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN

RN 815579-75-0 REGISTRY

ED Entered STN: 18 Jan 2005

CN Methanone, [4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl][3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

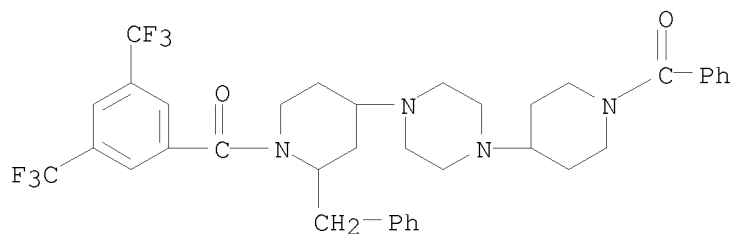
OTHER CA INDEX NAMES:

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)- (9CI)

MF C37 H40 F6 N4 O2

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 12 ibib abs hitstr 1-3

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

'HITSTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

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REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN

EPROP - Table of experimental properties  
PPROP - Table of predicted properties  
PROP - EPROP, ETAG, PPROP and SPEC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract  
APPS -- Application and Priority Information  
BIB -- CA Accession Number, plus Bibliographic Data  
CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

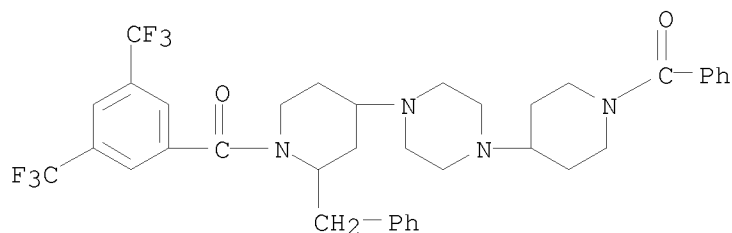
For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
ENTER DISPLAY FORMAT (IDE):

L2 ANSWER 1 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 815579-75-0 REGISTRY  
ED Entered STN: 18 Jan 2005  
CN Methanone, [4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl][3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)- (9CI)  
 MF C37 H40 F6 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



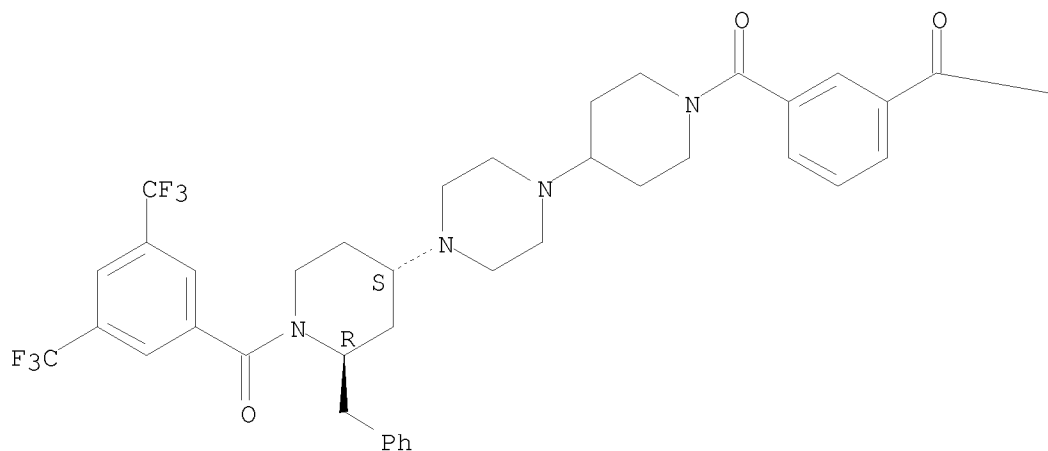
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

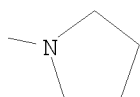
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 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 717137-60-5 REGISTRY  
 ED Entered STN: 27 Jul 2004  
 CN Methanone, [4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl][3-(1-pyrrolidinylcarbonyl)phenyl]- (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinylcarbonyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
 FS STEREOSEARCH  
 MF C42 H47 F6 N5 O3  
 SR CA  
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.

PAGE 1-A



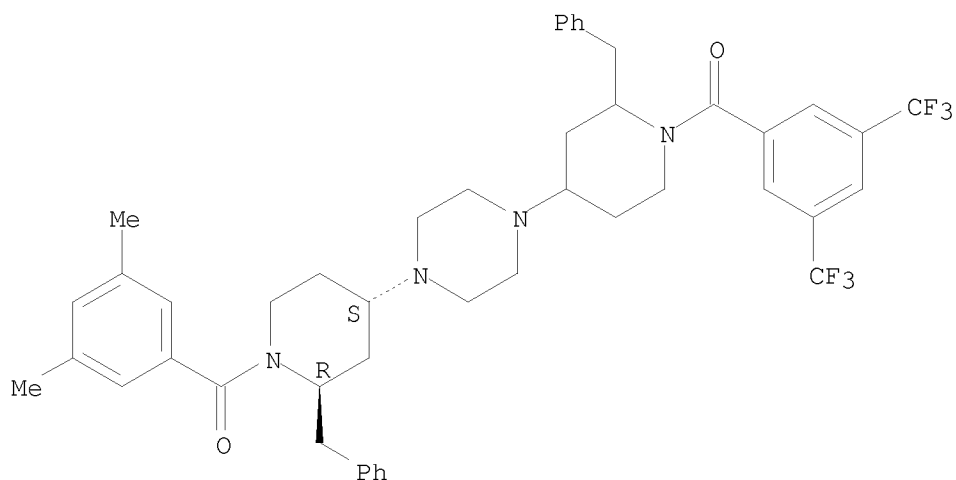


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 717137-57-0 REGISTRY  
ED Entered STN: 27 Jul 2004  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[(2R,4S)-1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, rel- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C46 H50 F6 N4 O2  
SR CA  
LC STN Files: CA, CAPLUS

Relative stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:n

=> d 12 ibib abs

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'  
'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
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SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
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PROP - EPROP, ETAG, PPROP and SPEC

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CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

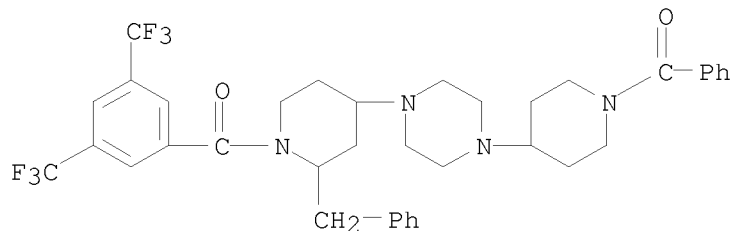
The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
ENTER DISPLAY FORMAT (IDE):

L2 ANSWER 1 OF 46 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 815579-75-0 REGISTRY  
 ED Entered STN: 18 Jan 2005  
 CN Methanone, [4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl][3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)- (9CI)  
 MF C37 H40 F6 N4 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

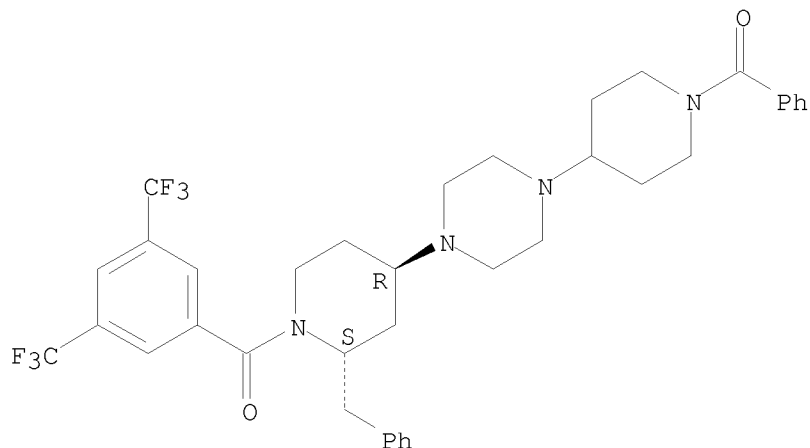
1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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 YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:n

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L2 46 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
 IN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4R)- (9CI)  
 MF C37 H40 F6 N4 O2

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1): 0

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FILE 'REGISTRY' ENTERED AT 15:55:34 ON 28 AUG 2008

L1 STRUCTURE UPLOADED

L2 46 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 16:00:15 ON 28 AUG 2008

L3 3 S L2

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FILE 'HCAPLUS' ENTERED AT 16:01:46 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:01:54 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:01:58 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:02:33 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:02:35 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:03:13 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:03:33 ON 28 AUG 2008

=> d l3 ibib abs hitstr 1-3

L3 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:1124611 HCAPLUS

DOCUMENT NUMBER: 142:74608

TITLE: A preparation of 1,4-di-(piperidin-4-yl)piperazine derivatives, useful as NK1 antagonists

INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth; Van Roosbroeck, Yves Emiel Maria;

Meert, Theo Frans  
PATENT ASSIGNEE(S): Janssen Pharmaceutica N. V., Belg.  
SOURCE: PCT Int. Appl., 84 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110415	A2	20041223	WO 2004-EP51048	20040607
WO 2004110415	A3	20050210		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004246817	A1	20041223	AU 2004-246817	20040607
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EP 1635811	A2	20060322	EP 2004-766038	20040607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1822828	A	20060823	CN 2004-80020237	20040607
BR 2004011290	A	20060829	BR 2004-11290	20040607
JP 2006527236	T	20061130	JP 2006-516137	20040607
MX 2005PA13295	A	20060309	MX 2005-PA13295	20051207
US 20060128721	A1	20060615	US 2005-560476	20051212
PRIORITY APPLN. INFO.:			WO 2003-EP50220	A 20030610
			WO 2004-EP51048	W 20040607
OTHER SOURCE(S):			MARPAT 142:74608	
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to a preparation of 1,4-di-(piperidin-4-yl)-piperazine derivs. of formula I [wherein: Q is O, NH, or N-alkyl; X is (CH<sub>2</sub>)<sub>0-2</sub>; Y is (CH<sub>2</sub>)<sub>1-2</sub>; Z is (CH<sub>2</sub>)<sub>1-2</sub>; E is a bond or O, S, NH, N-alkyl; each A represents independently from each other, a bond or (un)substituted (cyclo)alkyl; D is a bond, C(O), or SO<sub>2</sub>; L is H, alkoxy, aryloxy, alkylamino, or heterocyclyl-carbonyl, etc.; each R<sub>1</sub>, independently from each other, is selected from aryl, arylalkyl, or diarylalkyl; R<sub>2</sub> is alkyl, aryl, arylalkyl, or heterocyclylalkyl, etc.], useful as NK<sub>1</sub> receptor antagonists. The pharmaceutical composition according to the invention reduces to a large extent a number of unwanted side-effects associated with opioid analgesics, in particular emesis, respiratory depression and tolerance, thereby increasing the total tolerability of said opioids in pain treatment. For instance, 1,4-di-(piperidin-4-yl)piperazinecarboxothiophene derivative II (h-NK<sub>1</sub>, pIC<sub>50</sub> = 10; h-NK<sub>2</sub>, pIC<sub>50</sub> = 6.1; h-NK<sub>3</sub>, pIC<sub>50</sub> = 6.3) was prepared via amidation of 3-thiophenecarboxylic acid by 1,4-di-(piperidin-4-yl)piperazine derivative III with a yield of 58%.

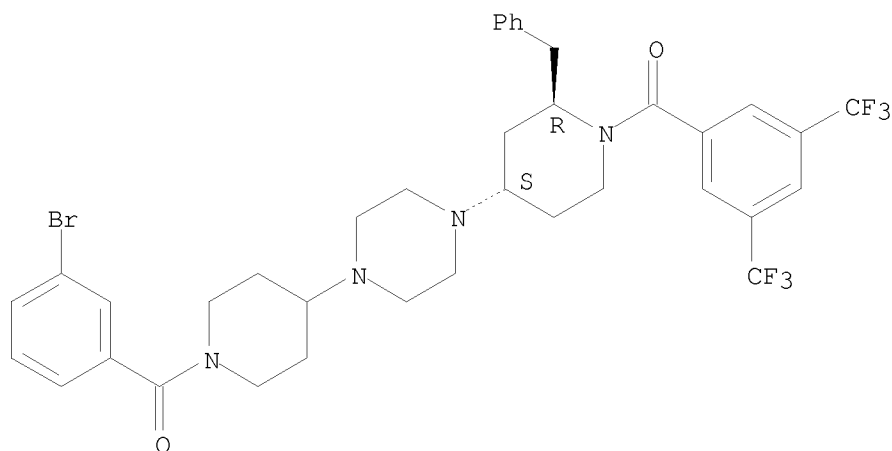
IT 681290-57-3P  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic

preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of di(piperidin-4-yl)piperazine derivs. useful as NK1 antagonists)

RN 681290-57-3 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-bromobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



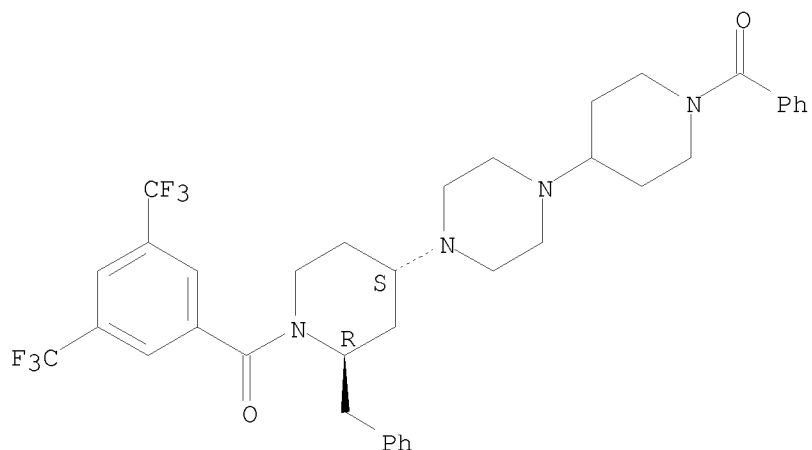
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681290-79-9P 681290-80-2P 681290-81-3P  
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681291-47-4P 681291-69-0P 681291-75-8P  
681291-76-9P 681291-77-0P 681291-82-7P  
815579-75-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of di(piperidin-4-yl)piperazine derivs. useful as NK1 antagonists)

RN 681290-31-3 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

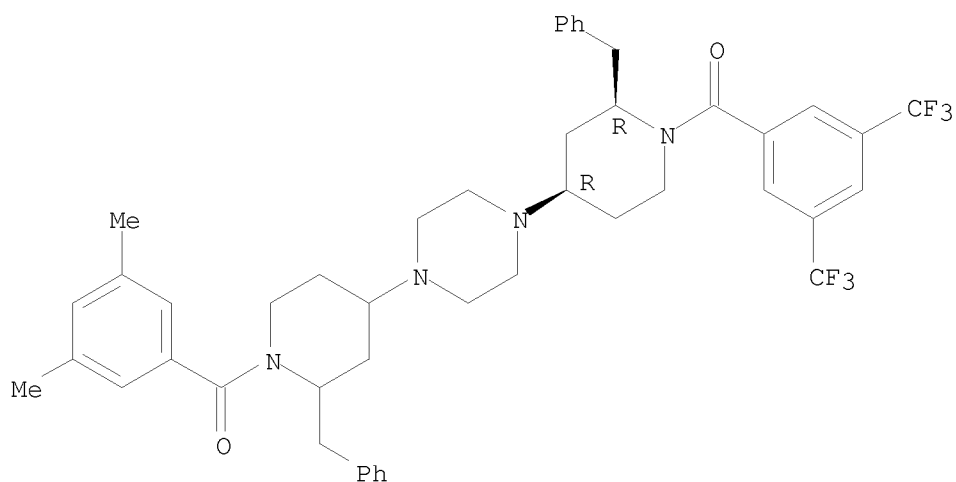
Absolute stereochemistry.



RN 681290-38-0 HCAPLUS

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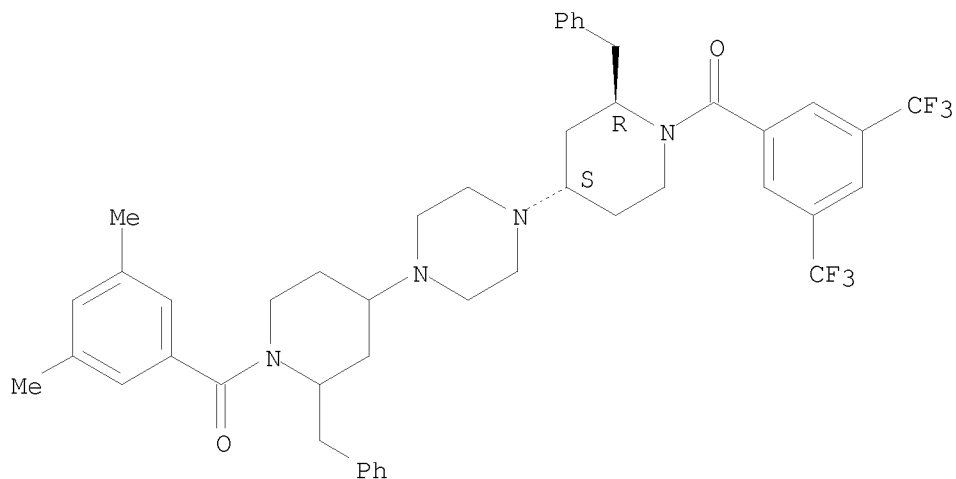
Relative stereochemistry.



RN 681290-39-1 HCAPLUS

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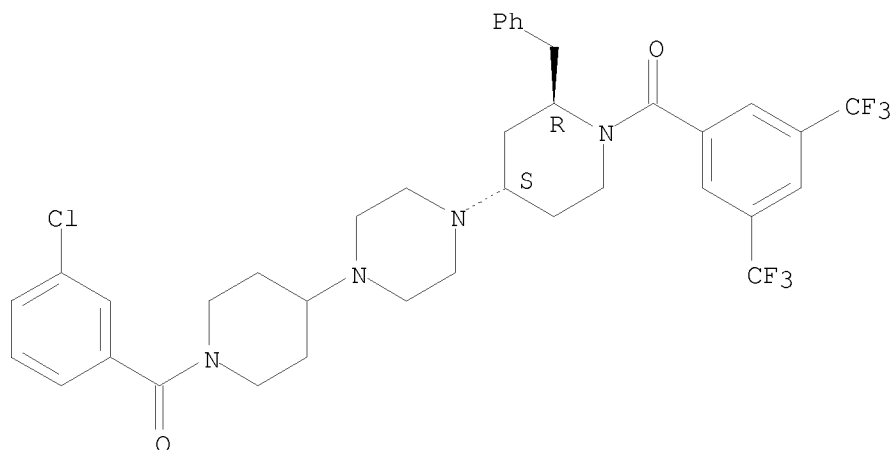
Relative stereochemistry.



RN 681290-58-4 HCAPLUS

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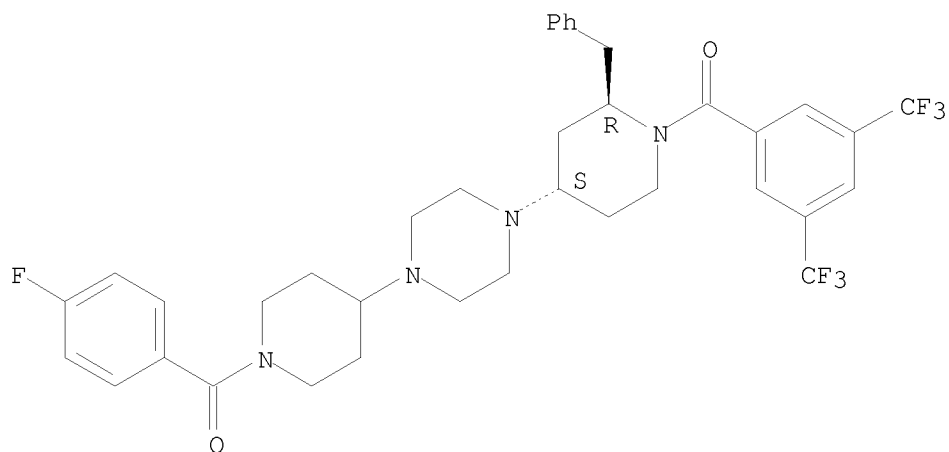
Absolute stereochemistry.



RN 681290-59-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(4-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

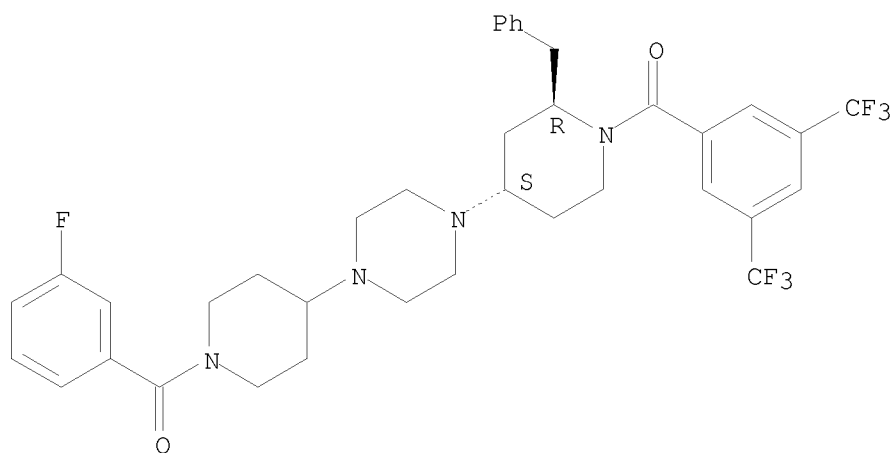
Absolute stereochemistry.



RN 681290-60-8 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

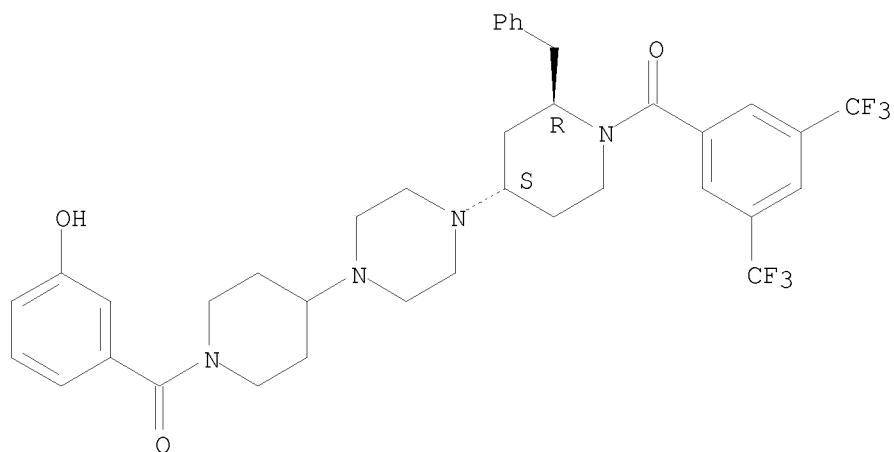
Absolute stereochemistry.



RN 681290-61-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

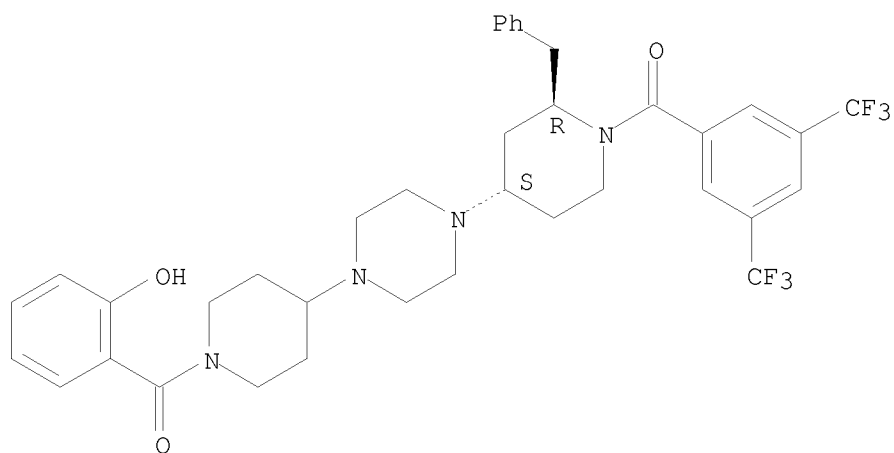
Absolute stereochemistry.



RN 681290-62-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

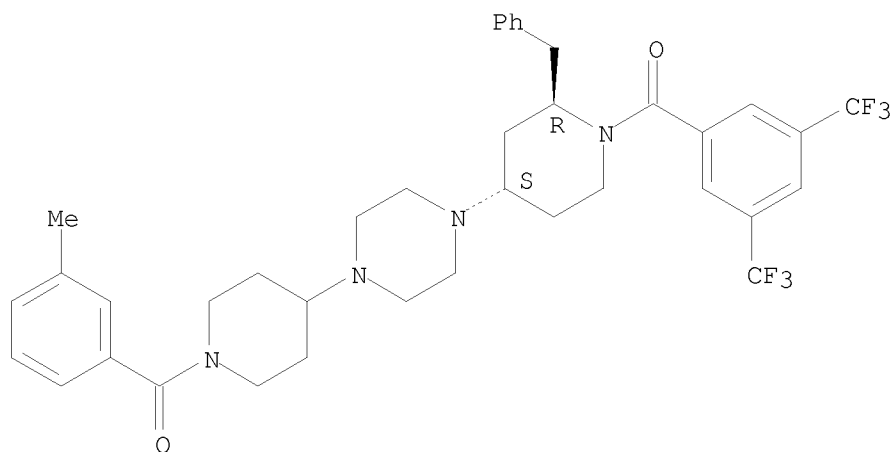
Absolute stereochemistry.



RN 681290-63-1 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

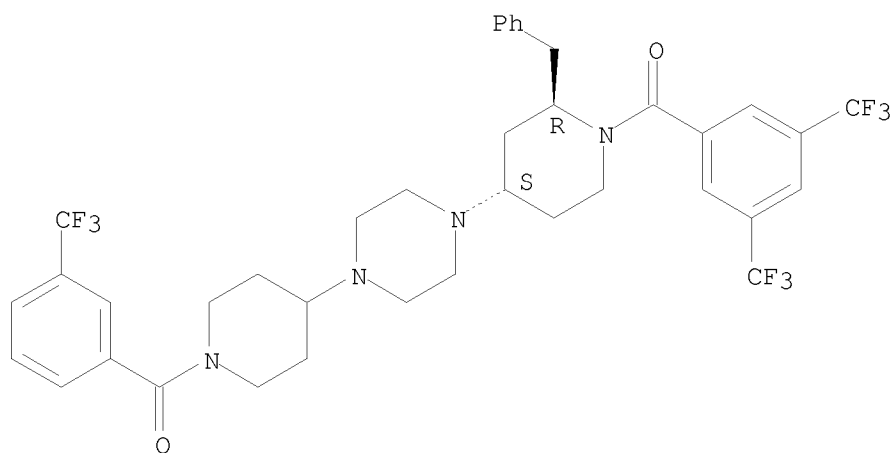
Absolute stereochemistry.



RN 681290-64-2 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(trifluoromethyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

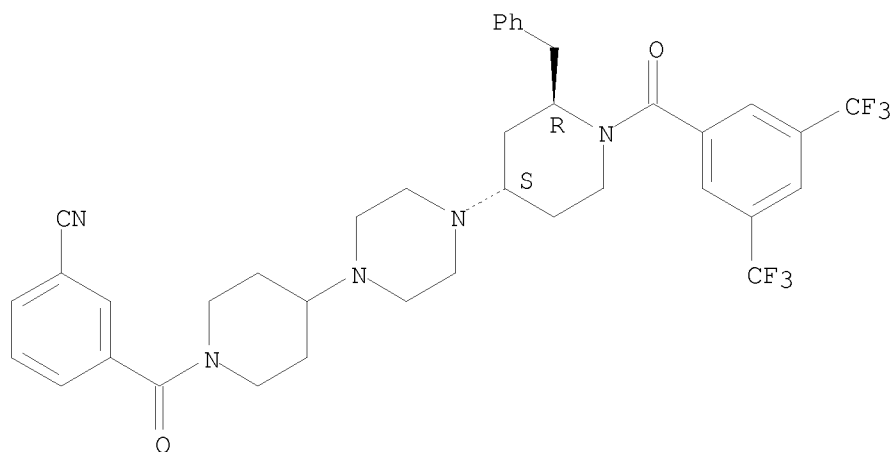
Absolute stereochemistry.



RN 681290-65-3 HCAPLUS

CN Benzonitrile, 3-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]- (CA INDEX NAME)

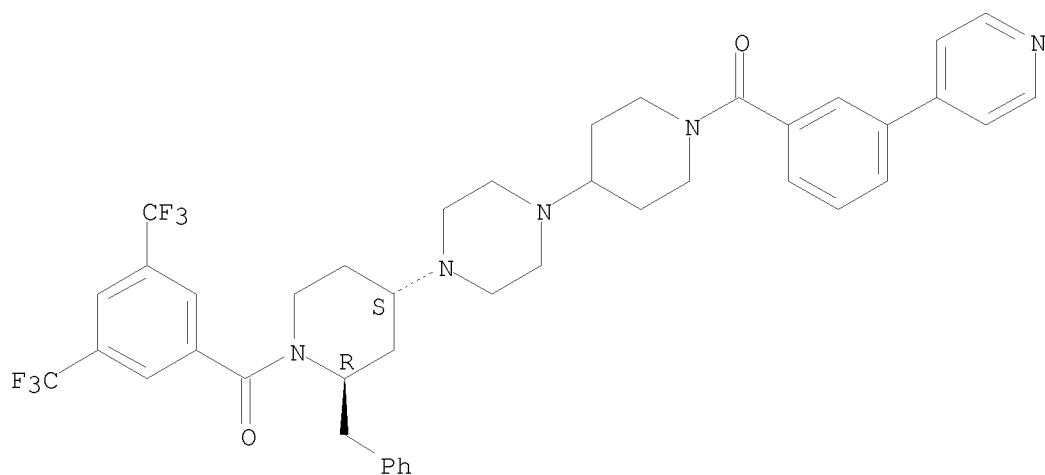
Absolute stereochemistry.



RN 681290-66-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(4-pyridinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

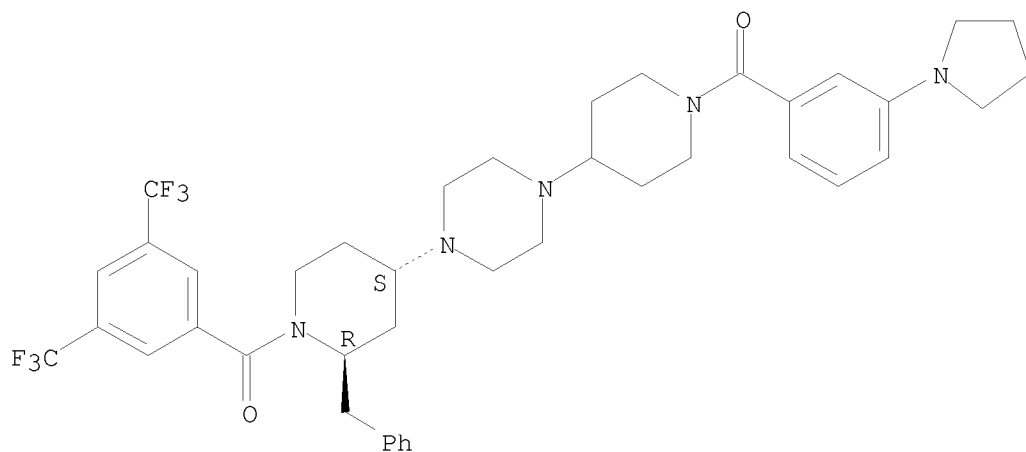
Absolute stereochemistry.



RN 681290-67-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

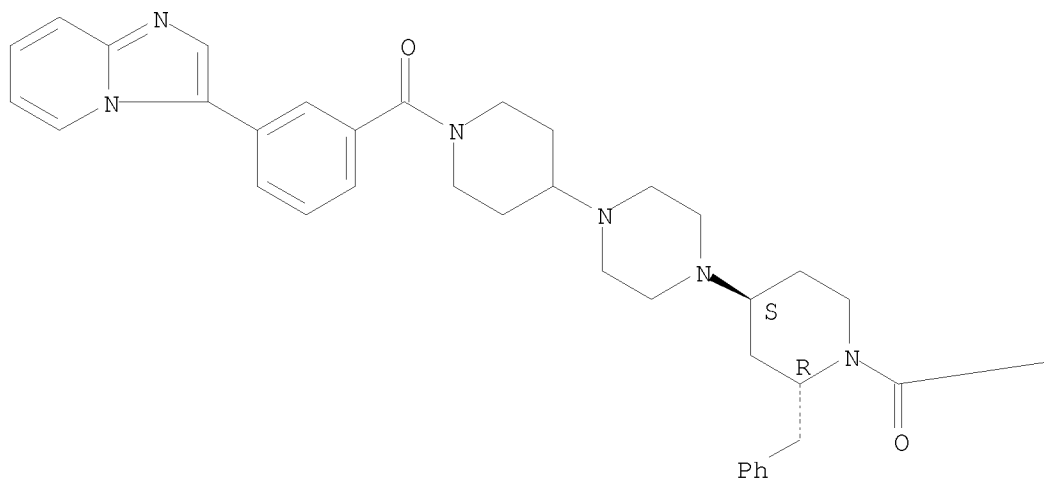


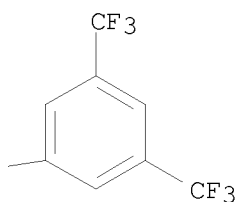
RN 681290-68-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-imidazo[1,2-a]pyridin-3-ylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

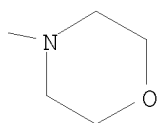
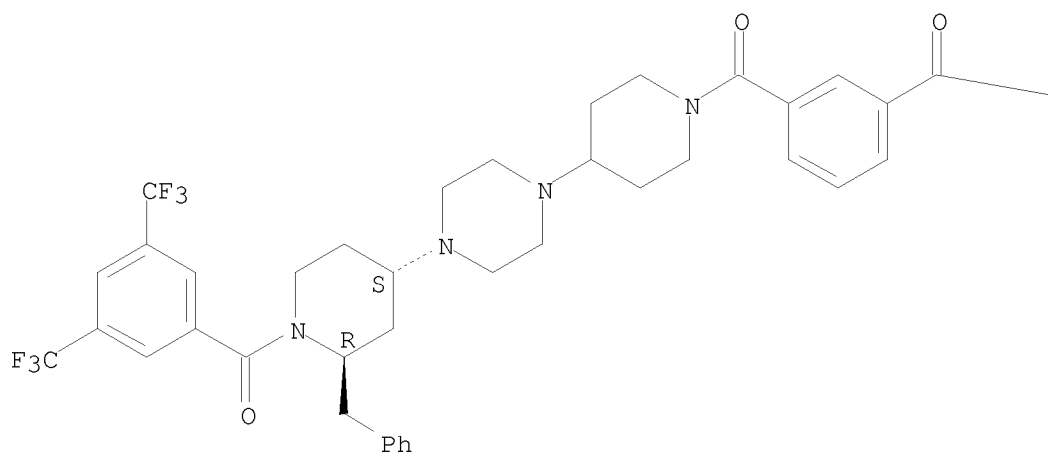




RN 681290-69-7 HCAPLUS

CN Methanone, [4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl][3-(4-morpholinylcarbonyl)phenyl]- (CA INDEX NAME)

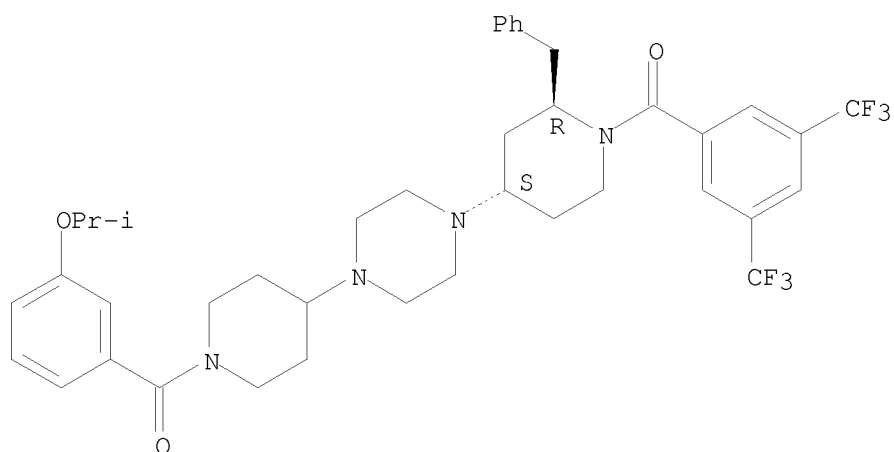
Absolute stereochemistry.



RN 681290-70-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[3-(1-methylethoxy)benzoyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

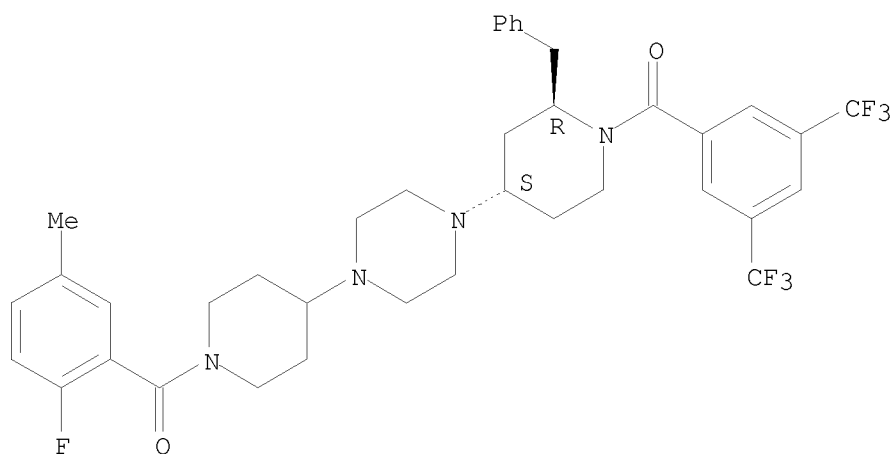
Relative stereochemistry.



RN 681290-71-1 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-fluoro-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

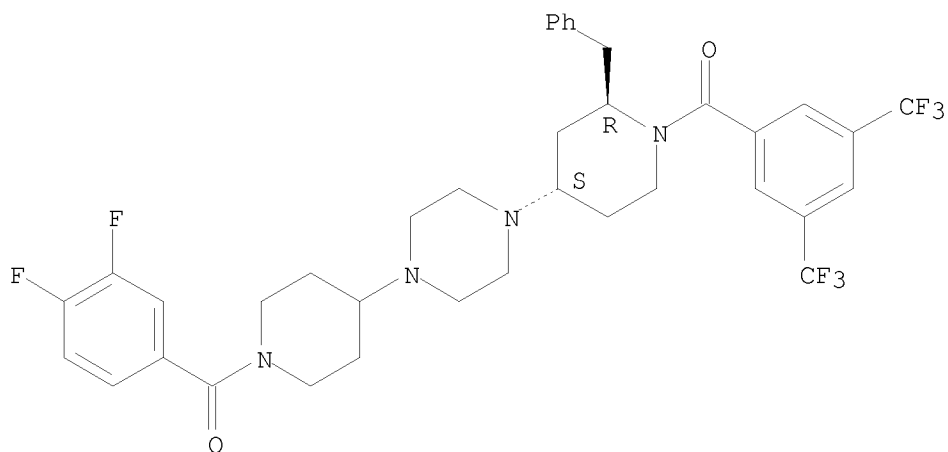
Absolute stereochemistry.



RN 681290-72-2 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,4-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

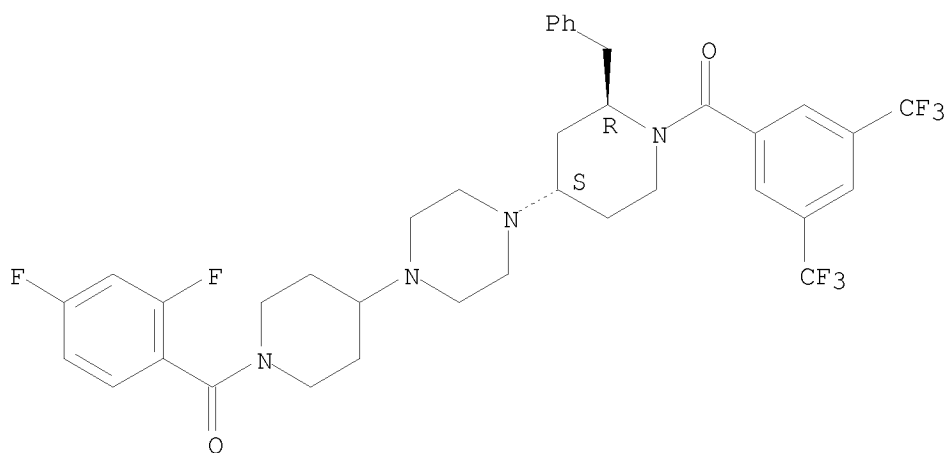
Absolute stereochemistry.



RN 681290-73-3 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,4-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

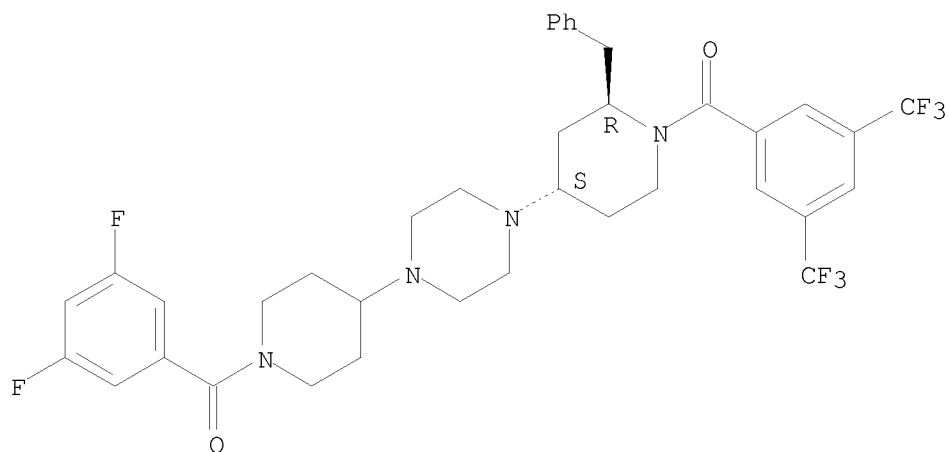
Absolute stereochemistry.



RN 681290-74-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

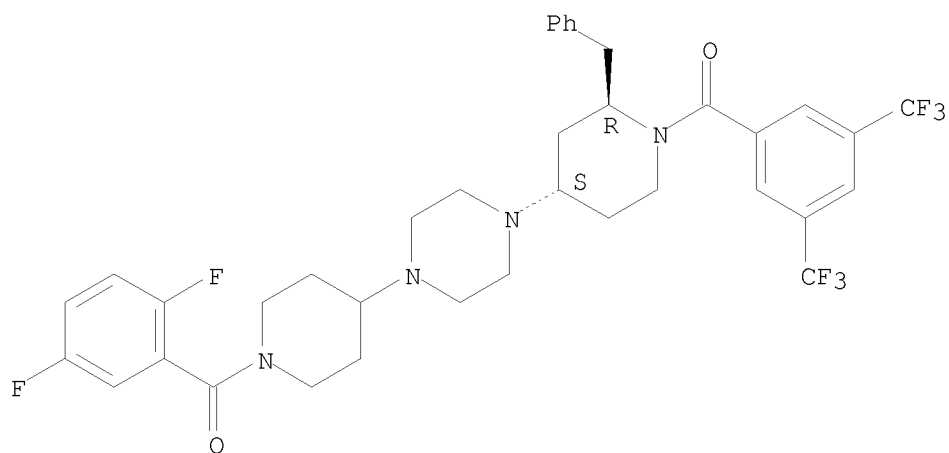
Absolute stereochemistry.



RN 681290-75-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

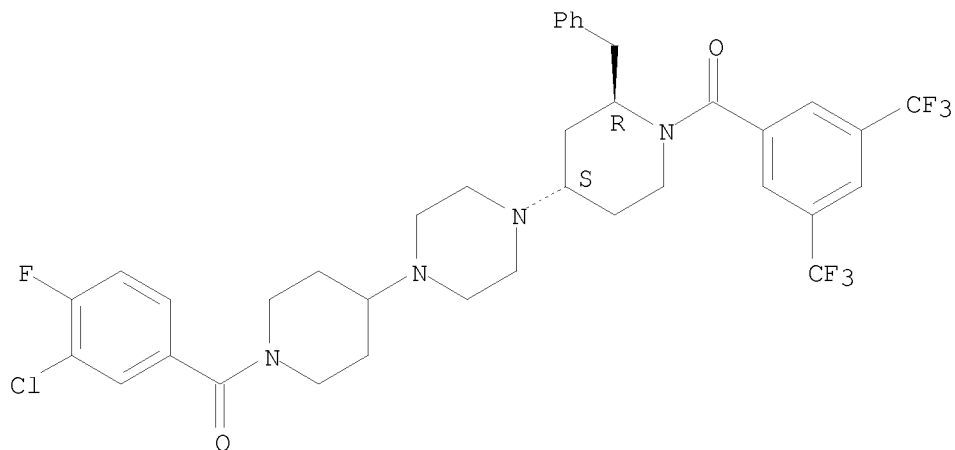
Absolute stereochemistry.



RN 681290-76-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chloro-4-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

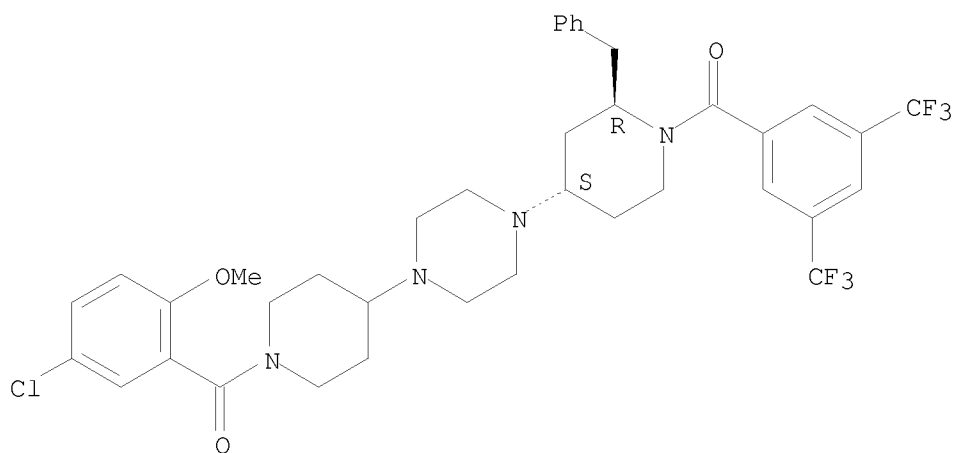
Absolute stereochemistry.



RN 681290-77-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

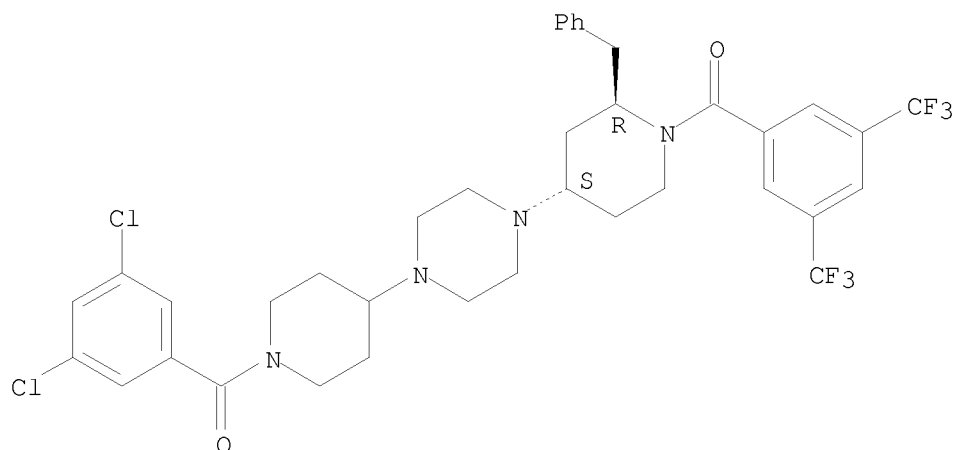
Absolute stereochemistry.



RN 681290-78-8 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dichlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

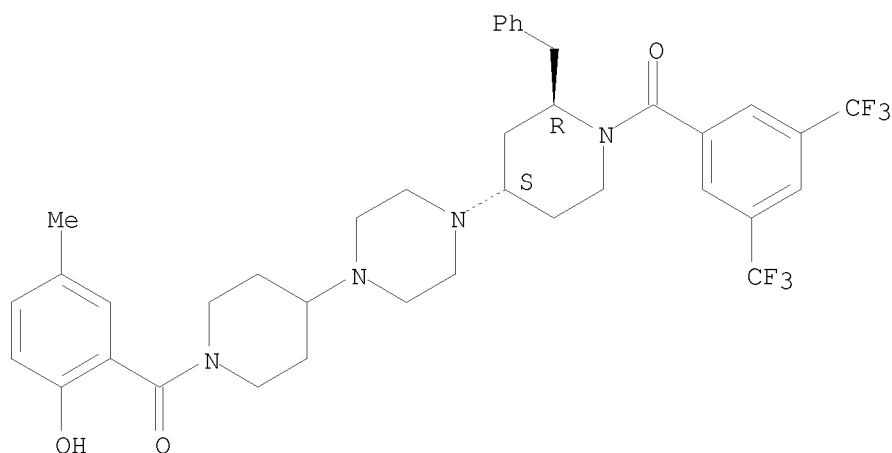
Absolute stereochemistry.



RN 681290-79-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxy-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

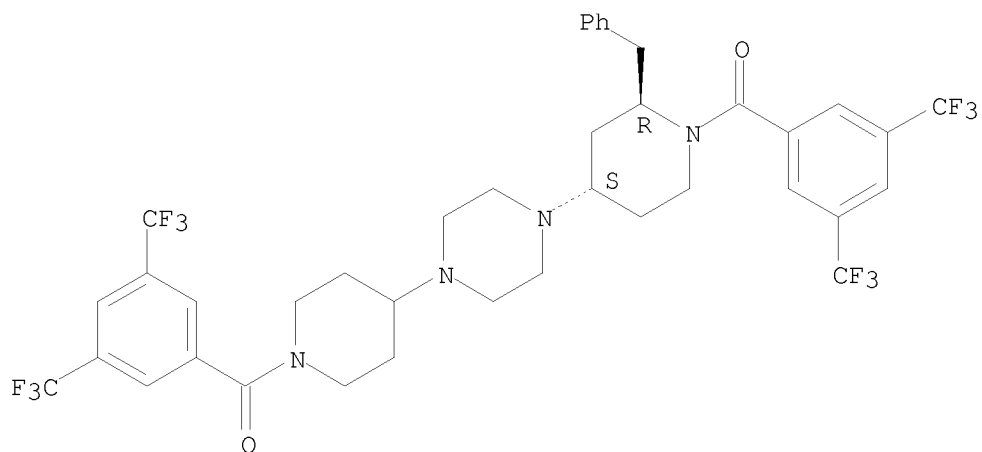
Absolute stereochemistry.



RN 681290-80-2 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[3,5-bis(trifluoromethyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

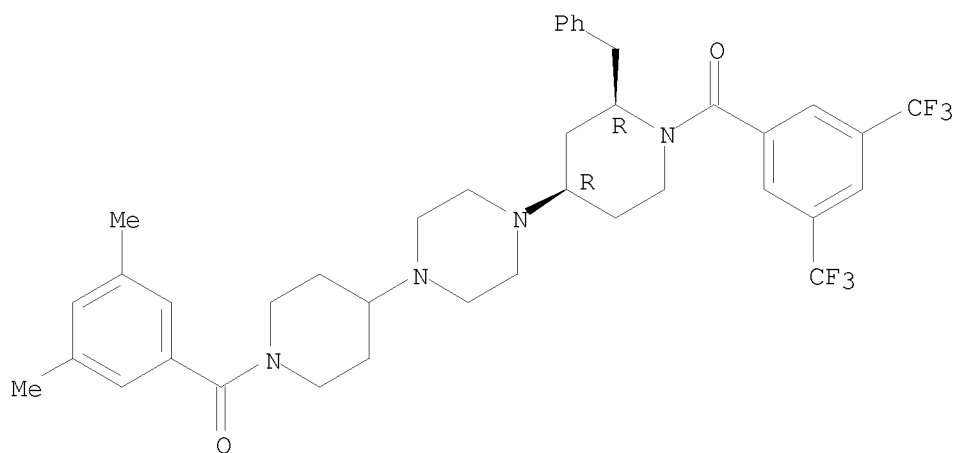
Relative stereochemistry.



RN 681290-81-3 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4R)-(9CI) (CA INDEX NAME)

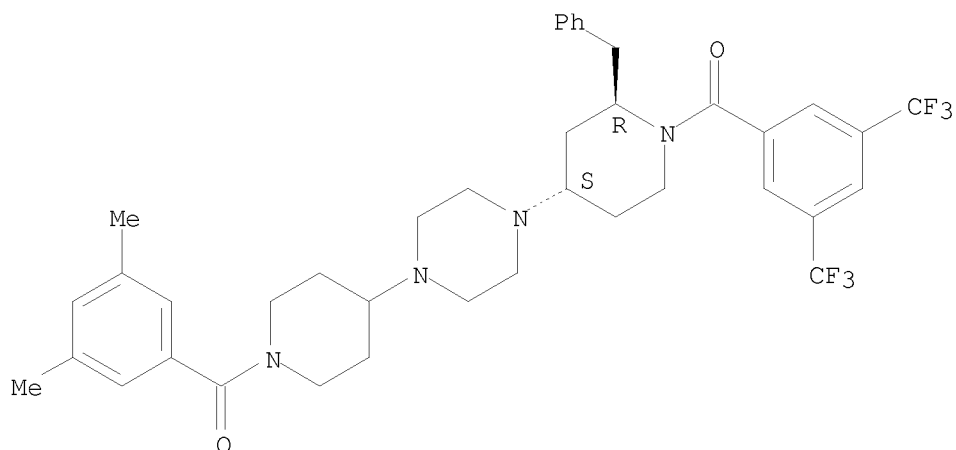
Absolute stereochemistry.



RN 681290-82-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

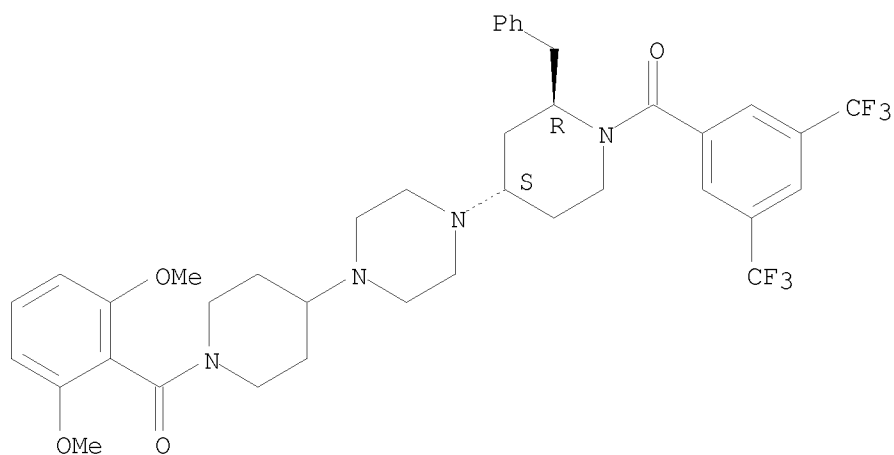
Relative stereochemistry.



RN 681290-83-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,6-dimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

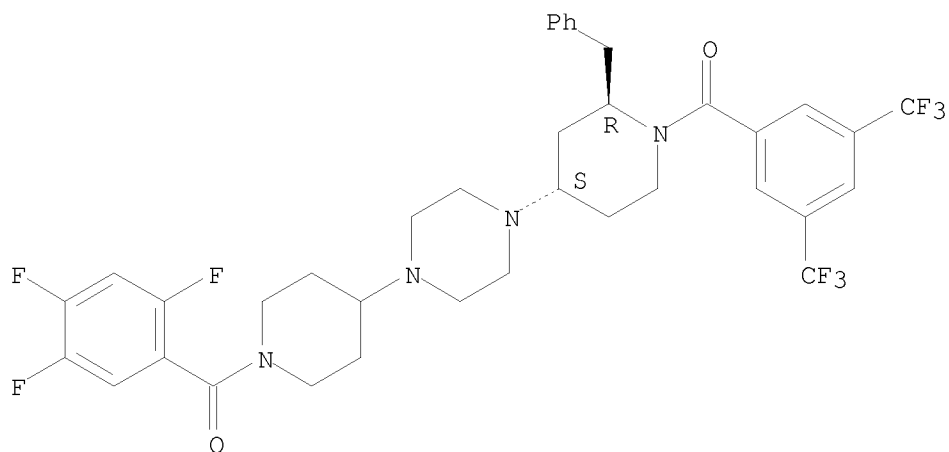
Absolute stereochemistry.



RN 681290-84-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(2,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

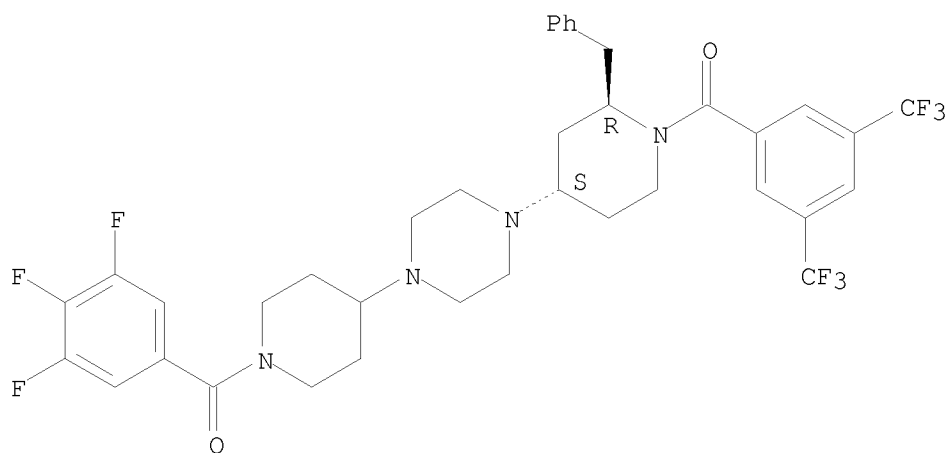
Absolute stereochemistry.



RN 681290-85-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

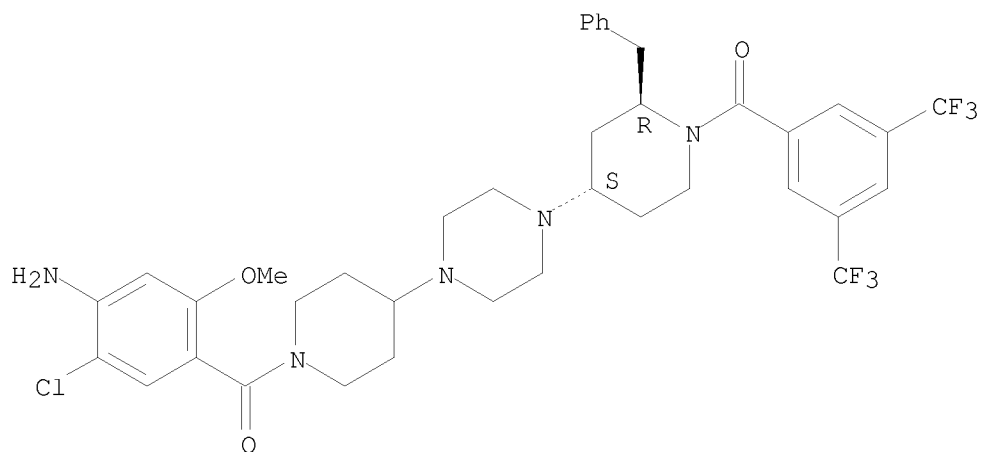
Absolute stereochemistry.



RN 681290-86-8 HCAPLUS

CN Piperidine, 4-[4-[1-(4-amino-5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

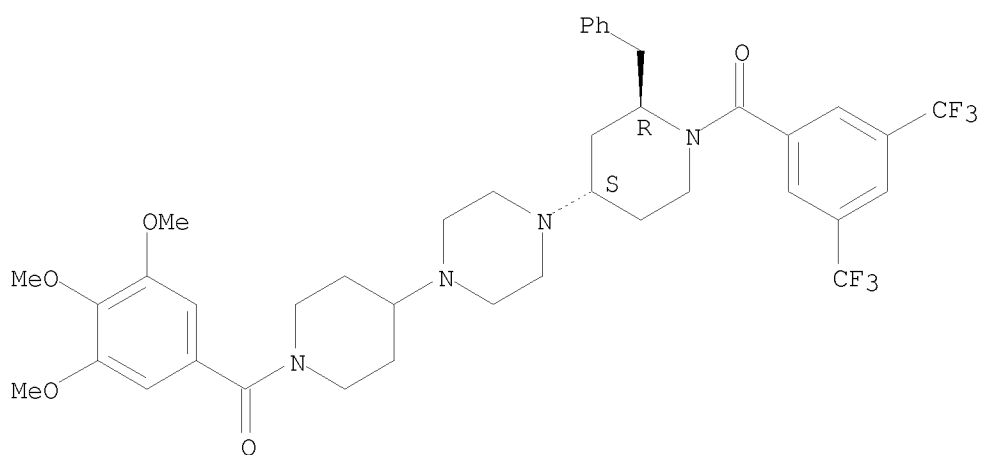
Absolute stereochemistry.



RN 681290-87-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

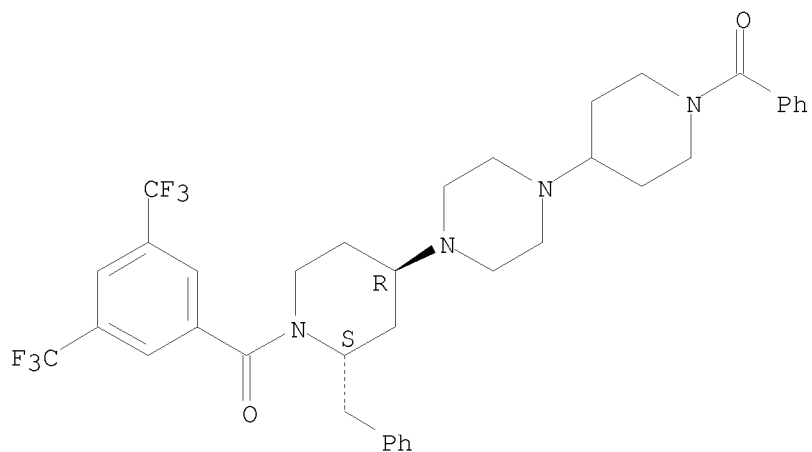
Absolute stereochemistry.



RN 681291-44-1 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4R)- (9CI) (CA INDEX NAME)

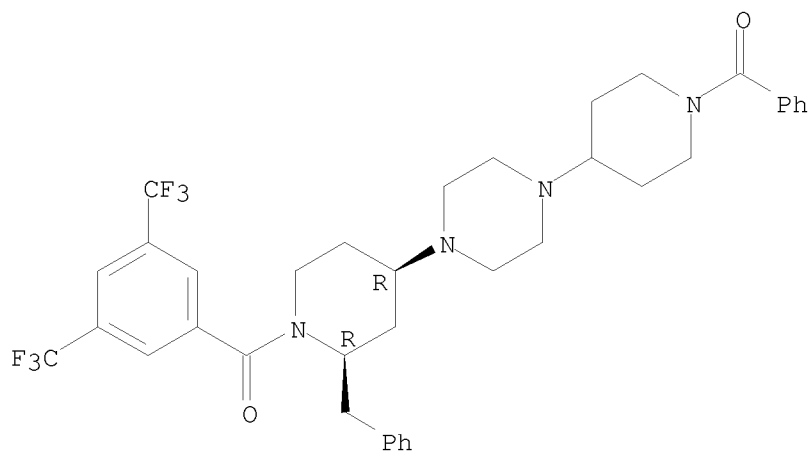
Absolute stereochemistry.



RN 681291-45-2 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidiny1)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4R)- (9CI) (CA INDEX NAME)

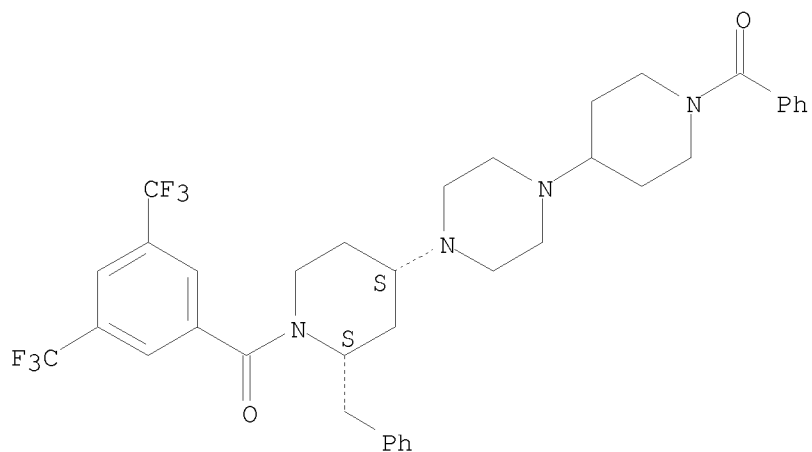
Absolute stereochemistry.



RN 681291-46-3 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidiny1)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4S)- (9CI) (CA INDEX NAME)

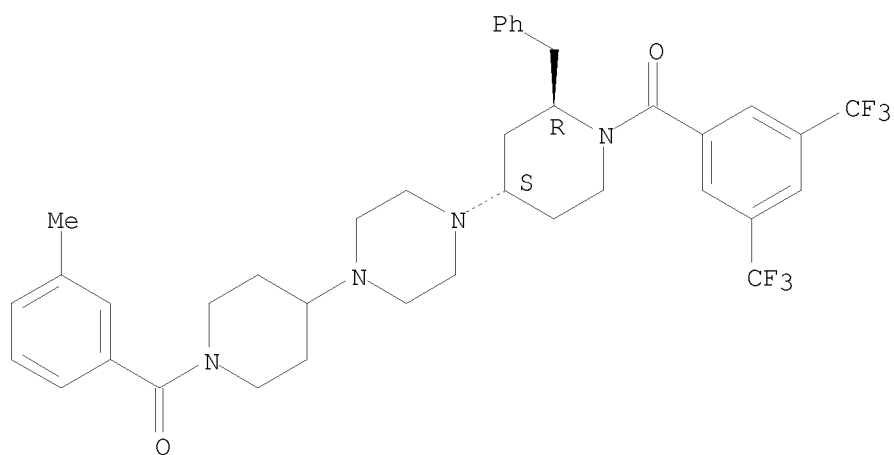
Absolute stereochemistry.



RN 681291-47-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, dihydrochloride, (2R,4S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

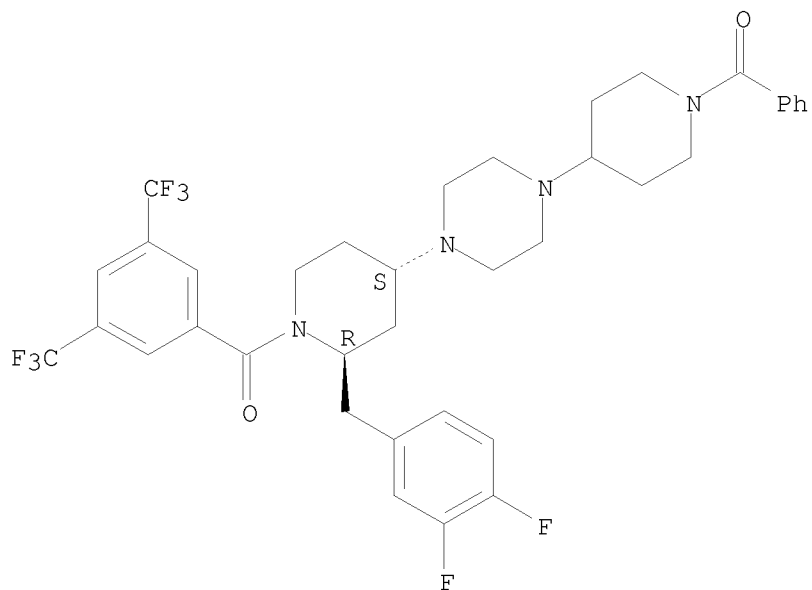


● 2 HCl

RN 681291-69-0 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-[(3,4-difluorophenyl)methyl]-, (2R,4S)-(9CI) (CA INDEX NAME)

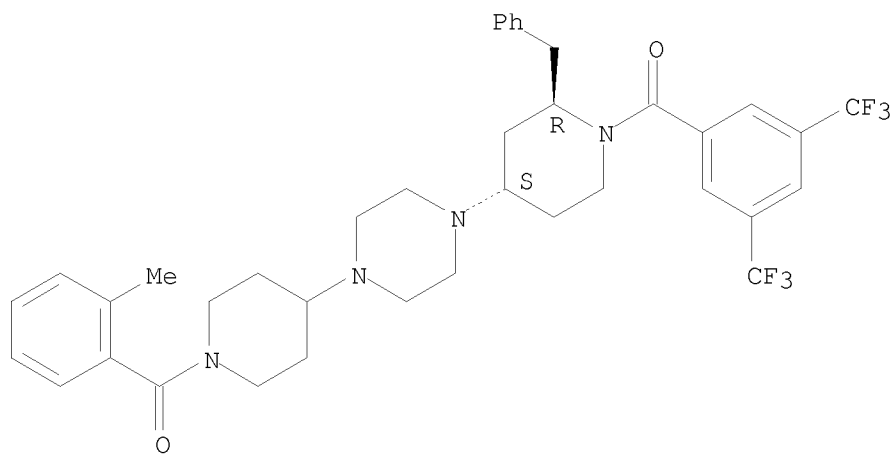
Absolute stereochemistry.



RN 681291-75-8 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

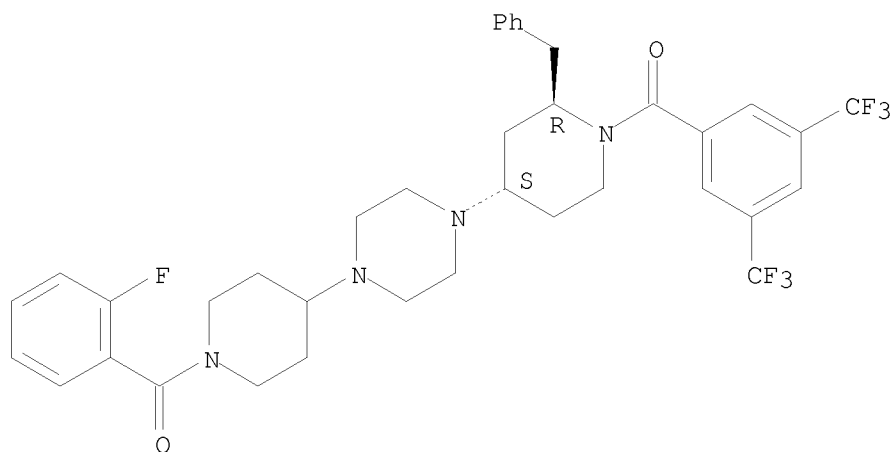
Absolute stereochemistry. Rotation (-).



RN 681291-76-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

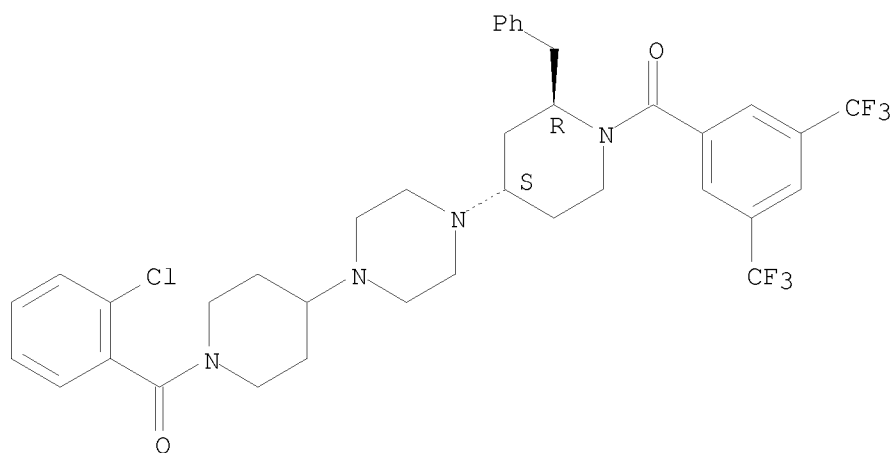
Absolute stereochemistry. Rotation (-).



RN 681291-77-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-chlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

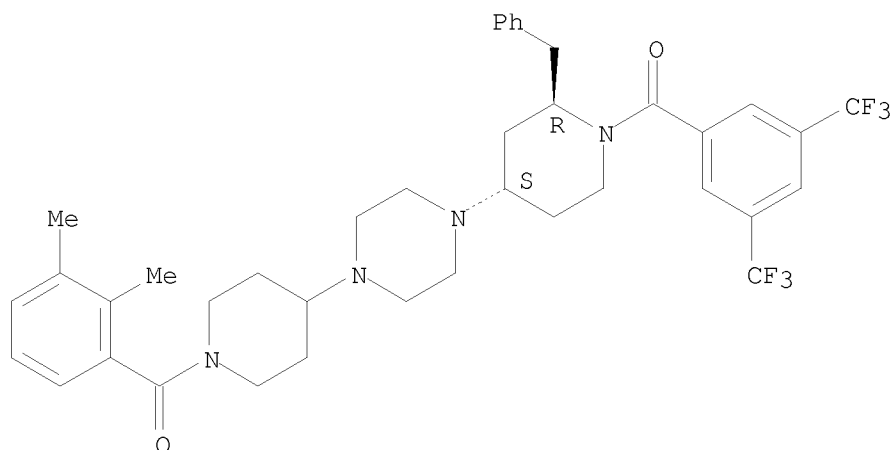
Absolute stereochemistry. Rotation (-).



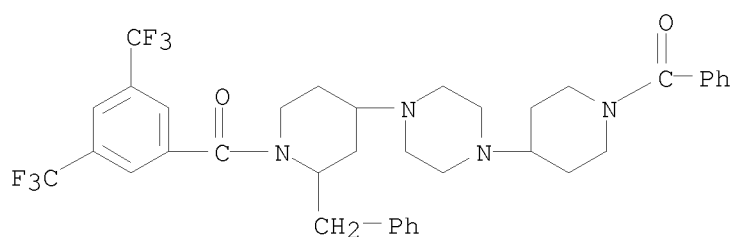
RN 681291-82-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,3-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 815579-75-0 HCAPLUS  
 CN Methanone, [4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl][3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)



L3 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:546478 HCAPLUS  
 DOCUMENT NUMBER: 141:89116  
 TITLE: Preparation of substituted 1,4-di-piperidin-4-yl-piperazine derivatives and their use as tachykinin antagonists  
 INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth; Van Roosbroeck, Yves Emiel Maria  
 PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.  
 SOURCE: PCT Int. Appl., 60 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056772	A1	20040708	WO 2002-EP14836	20021223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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NO 2005002192	A 20050504	NO 2005-2192 20050504
PRIORITY APPLN. INFO.:		WO 2002-EP11328 A 20021008
		WO 2002-EP14836 A 20021223
		WO 2003-EP50697 W 20031007
OTHER SOURCE(S):	MARPAT 141:89116	
GI		

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Tile compds. I [Q = 0 or NR3; X = covalent bond, -O-, -S-, or -NR3; R1 independently = Ar1, Ar1-alkyl, and di(Ar1)-alkyl; R2 = alkyl, Ar2, Ar2-alkyl, Het1, Het1-alkyl; R3 independently = H or alkyl; Y = covalent bond, CO, SO2; M independently = covalent bond, (un)substituted-alkyl, -(un)saturated carbocycle; L = H, alkyloxy, Ar3oxy, alkylamine, etc.; Ar1 = (un)substituted phenyl; Ar2 = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, aminocarbonyl, and alkyloxy; Ar3 = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, amino, alkyloxy, OH, pyridinyl, etc.; Het1 = monocyclic heterocyclic radical selected from pyrrolyl, pyrazolyl, imidazolyl, furanyl, etc.; m = 1 or 2 provided that if m = 2, then n = 1; n = 0-2; p = 1-2; q = 0-1] and their pharmaceutically acceptable salts are disclosed as having tachykinin antagonistic activity, in particular NK1 antagonistic activity. Their preparation, compns. comprising them and their use as a medicine, in particular for the treatment of emesis, anxiety, depression and irritable bowel syndrome (IBS) are disclosed. Thus, II was prepared via resolution of III (preparation given), de-N-benzylolation, and reaction with 1-(phenylmethyl)-4-piperidinone. Selected compds. of the invention were evaluated for binding to h-NK1, h-NK2, and h-NK3 receptors with all compds. showing (sub)nanomolar affinity for h-NK1 with most possessing more than 100-fold selectivity towards the h-NK2 and h-NK3 receptors. In view of their capability to antagonize the actions of tachykinins by blocking the tachykinin receptors, and in particular antagonizing the

actions of substance P by blocking the NK1 receptor, the compds. according to the invention are useful as a medicine, in particular in the prophylactic and therapeutic treatment of tachykinin-mediated conditions, such as, for instance CNS disorders, in particular depression, anxiety disorders, stress-related disorders, sleep disorders, cognitive disorders, personality disorders, schizoaffective disorders, eating disorders, neurodegenerative diseases, addiction disorders, mood disorders, sexual dysfunction, pain and other CNS-related conditions; inflammation; allergic disorders; emesis; gastrointestinal disorders, in particular IBS; skin disorders; vasospastic diseases; fibrosing and collagen diseases; disorders related to immune enhancement or suppression and rheumatic diseases and body weight control.

IT 681290-31-3P 681290-58-4P 681290-62-0P  
681290-65-3P 681290-67-5P 681290-74-4P  
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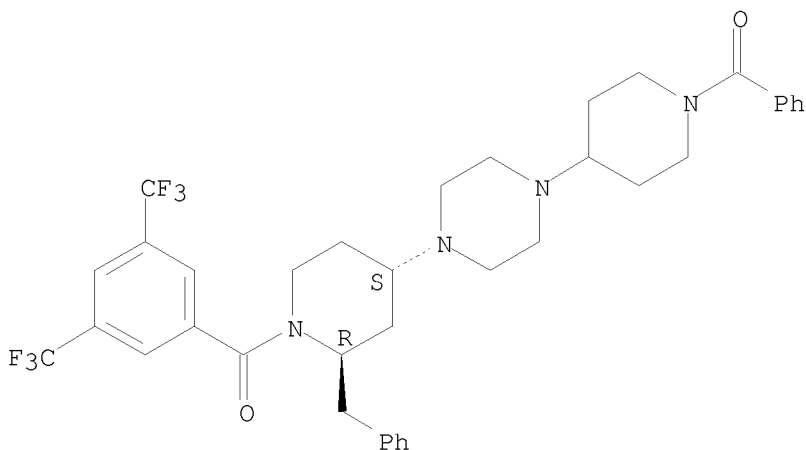
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; stereoselective preparation of 1,4-dipiperidin-4-ylpiperazines with tachykinin antagonist activity)

RN 681290-31-3 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

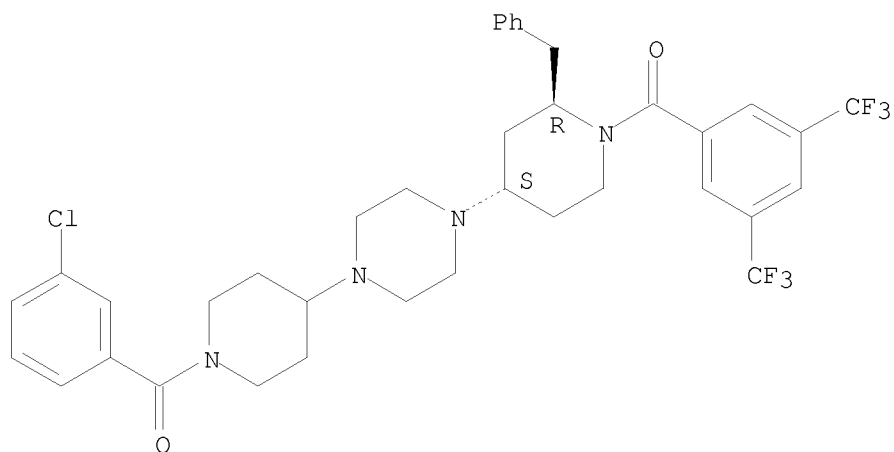
Absolute stereochemistry.



RN 681290-58-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

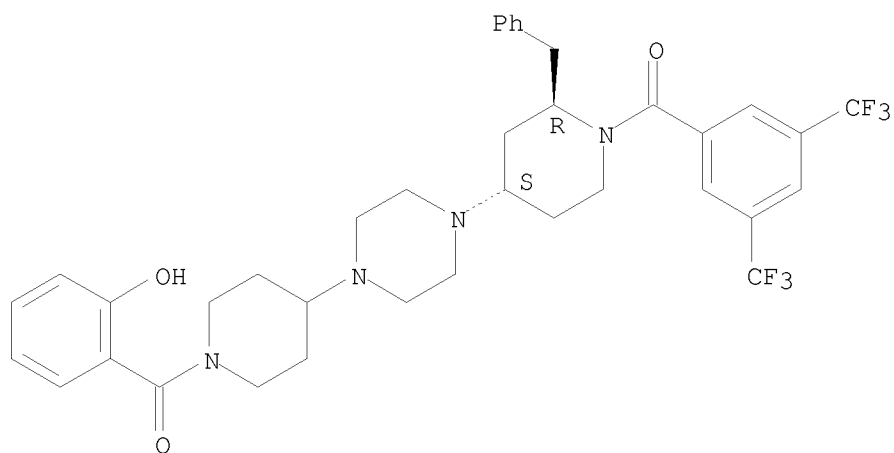
Absolute stereochemistry.



RN 681290-62-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

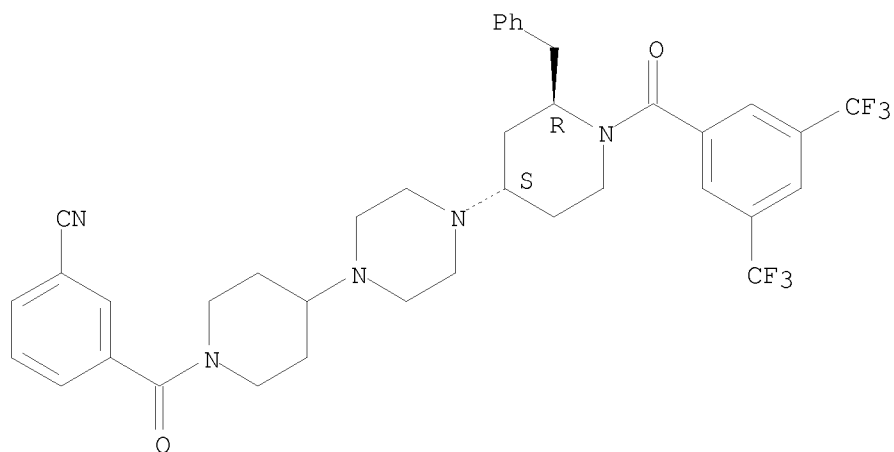
Absolute stereochemistry.



RN 681290-65-3 HCAPLUS

CN Benzonitrile, 3-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]- (CA INDEX NAME)

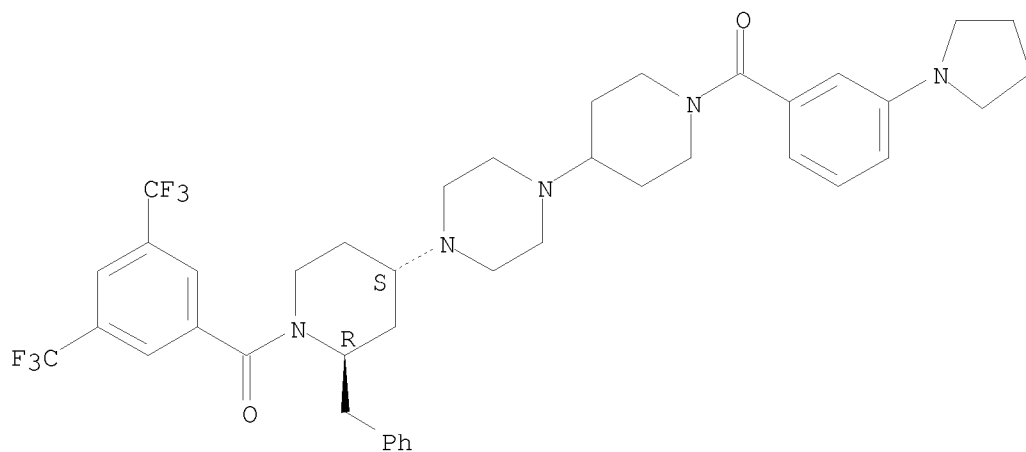
Absolute stereochemistry.



RN 681290-67-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

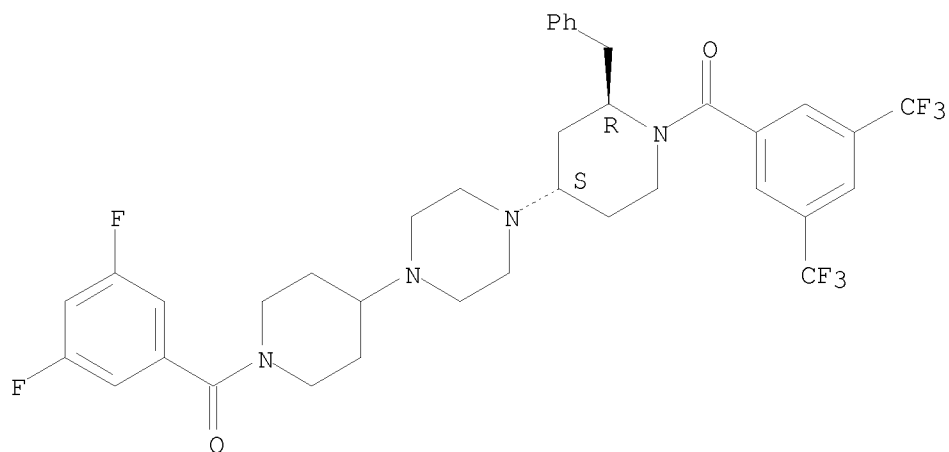
Absolute stereochemistry.



RN 681290-74-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

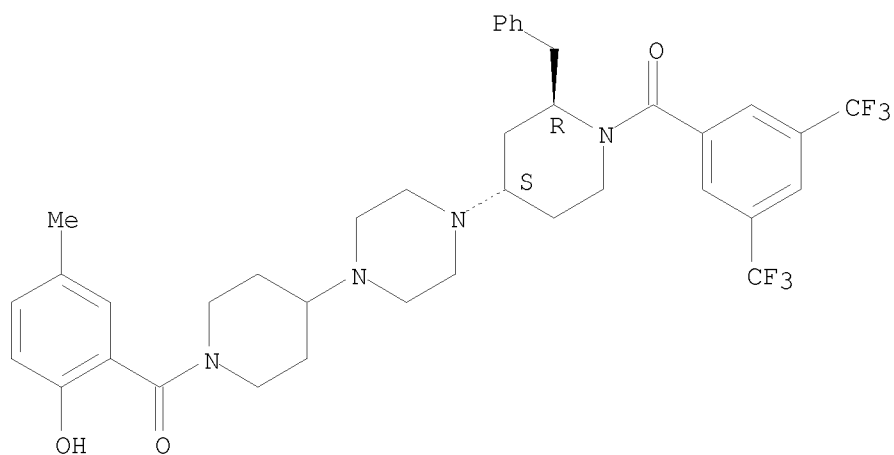
Absolute stereochemistry.



RN 681290-79-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxy-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

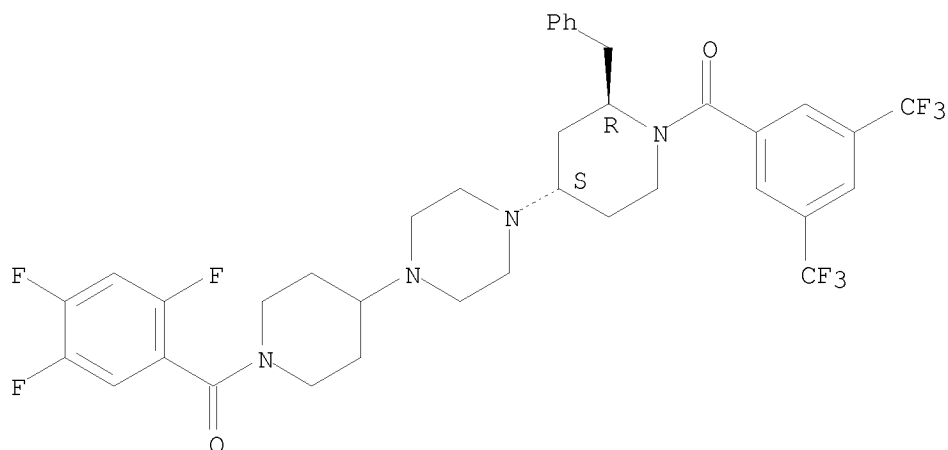
Absolute stereochemistry.



RN 681290-84-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(2,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

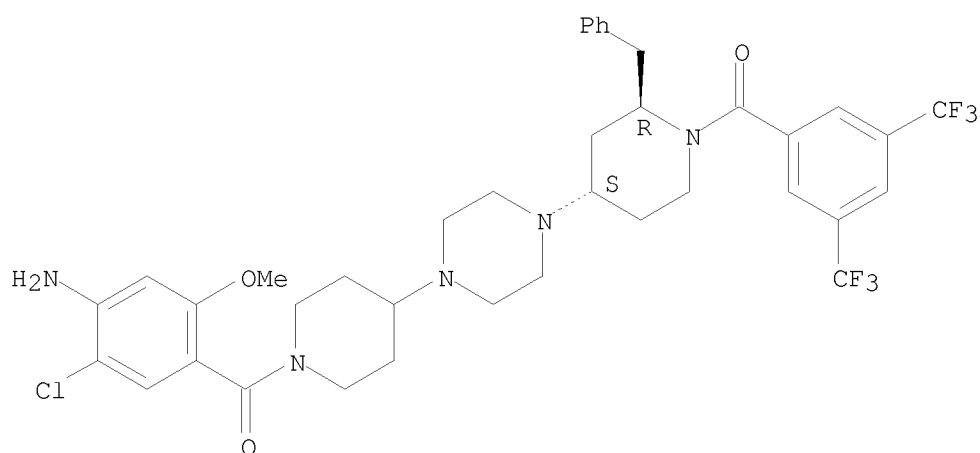
Absolute stereochemistry.



RN 681290-86-8 HCAPLUS

CN Piperidine, 4-[4-[1-(4-amino-5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

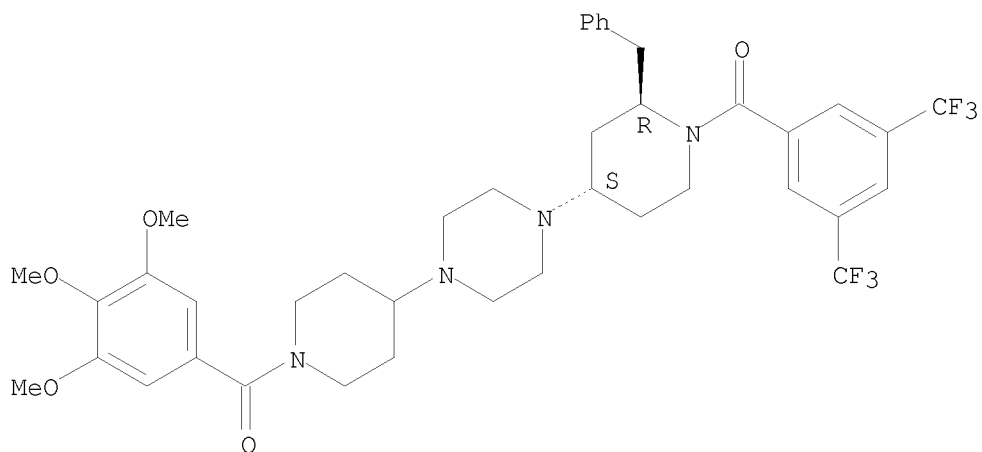
Absolute stereochemistry.



RN 681290-87-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

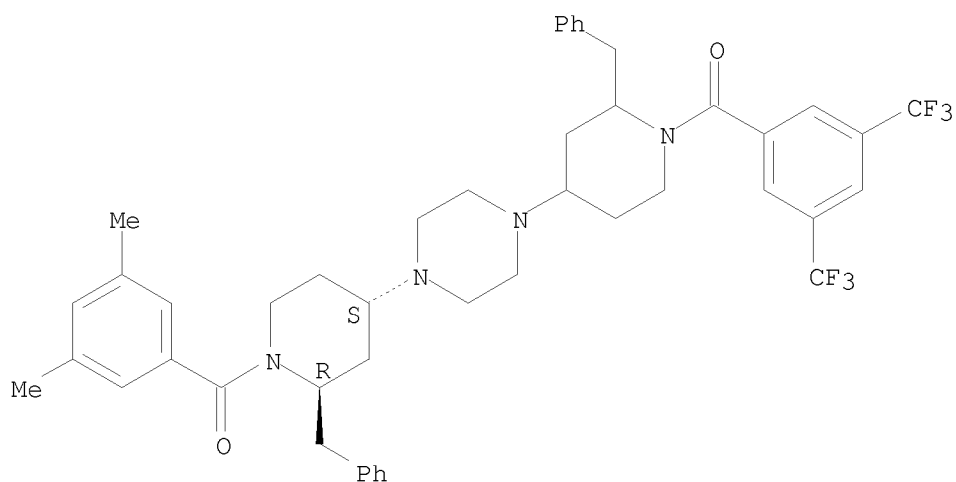
Absolute stereochemistry.



RN 717137-57-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[(2R,4S)-1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, rel- (9CI) (CA INDEX NAME)

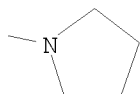
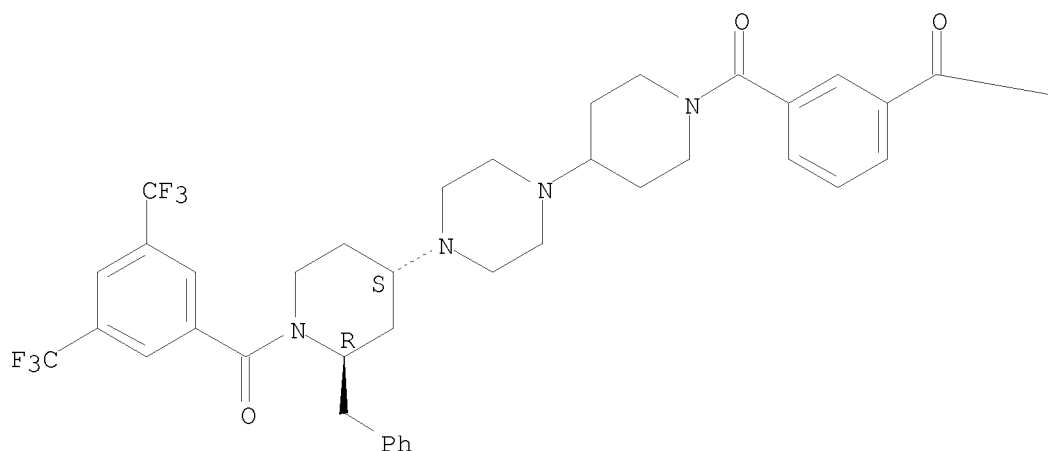
Relative stereochemistry.



RN 717137-60-5 HCAPLUS

CN Methanone, [4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl][3-(1-pyrrolidinylcarbonyl)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:333696 HCAPLUS

DOCUMENT NUMBER: 140:357378

TITLE: Preparation of 1,4-di(piperidin-4-yl)piperazine derivatives as neurokinin antagonists

INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth; Van Roosbroeck, Yves Emiel Maria; Diels, Gaston Stanislas Marcella

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 93 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

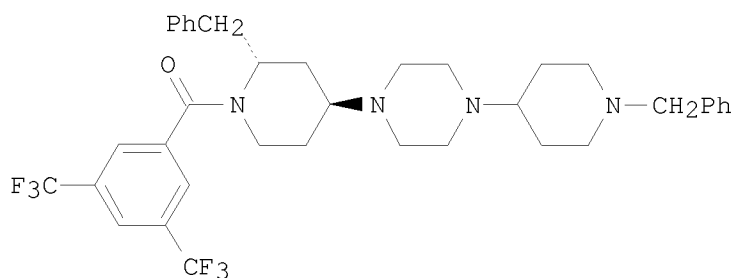
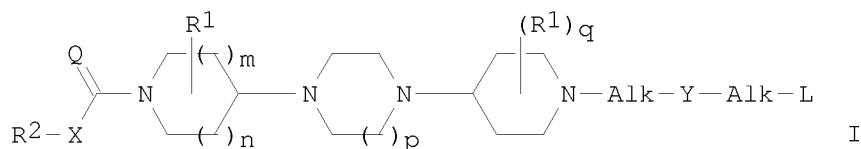
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

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 PRIORITY APPLN. INFO.: WO 2002-EP11328 A 20021008  
 WO 2002-EP14836 A 20021223  
 WO 2003-EP50697 W 20031007  
 OTHER SOURCE(S): MARPAT 140:357378  
 GI



AB Title compds. I [wherein Q = O, amino; X = a covalent bond, O, S, amino; R1 = independently (un)substituted Ph, phenylalkyl, diphenylalkyl; Alk = independently a covalent bond, (un)substituted hydrocarbon radical; Y = a covalent bond, CO, SO2; L = H, alkyloxy, carbonyl, (di)alkylamino, phenylcarbonyl, etc.; n = 0-2, m = 1-2; p = 1-2; q = 0-1; and pharmaceutically acceptable acid or base addition salts thereof, the stereochem. isomeric forms thereof, the N-oxide form thereof and prodrugs thereof] were prepared as neurokinin (NK) antagonists. For example, reductive N-alkylation of (2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-

(phenylmethyl)-4-(1-piperazinyl)piperidine with 1-(phenylmethyl)-4-piperidinone gave II. The prepared title compds. showed (sub)nanomolar affinity for the human-NK1 receptor, most of them with more than 100-fold selectivity towards the h-NK2 and h-NK3 receptors. Thus, I and their pharmaceutical compns. are useful for the treatment of neurokinin-mediated conditions, such as emesis, anxiety, depression, pain, pancreatitis and IBS (no data).

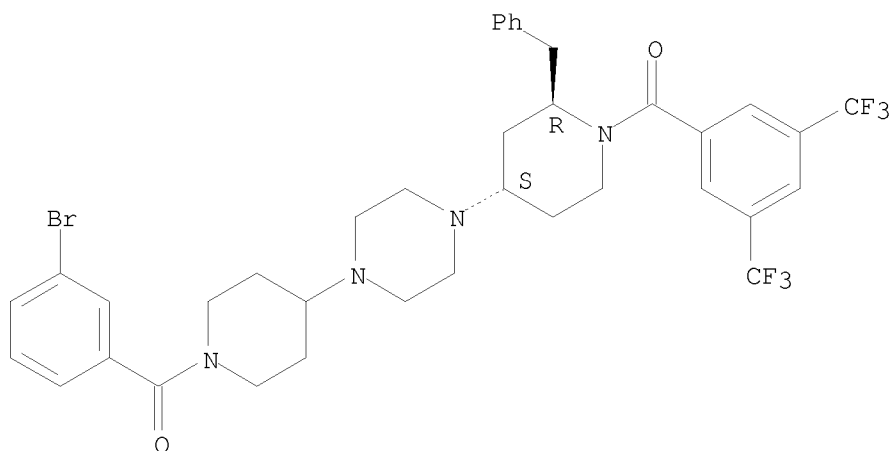
IT 681290-57-3P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of 1,4-di(piperidin-4-yl)piperazine derivs. as neurokinin antagonists)

RN 681290-57-3 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-bromobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



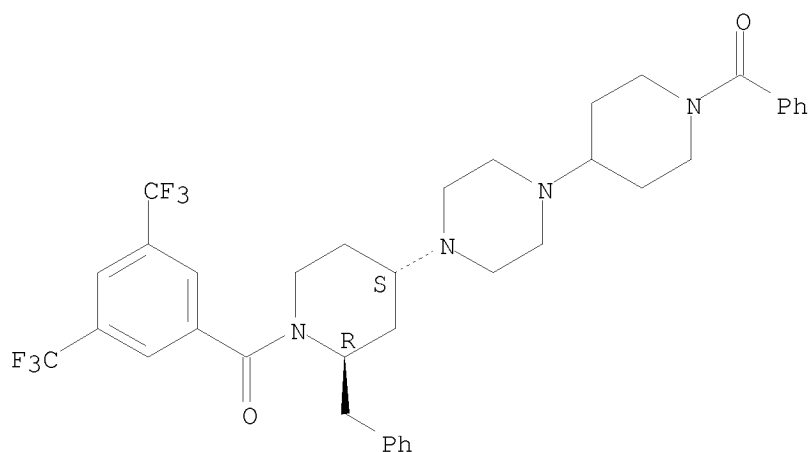
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of 1,4-di(piperidin-4-yl)piperazine derivs. as neurokinin antagonists)

RN 681290-31-3 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

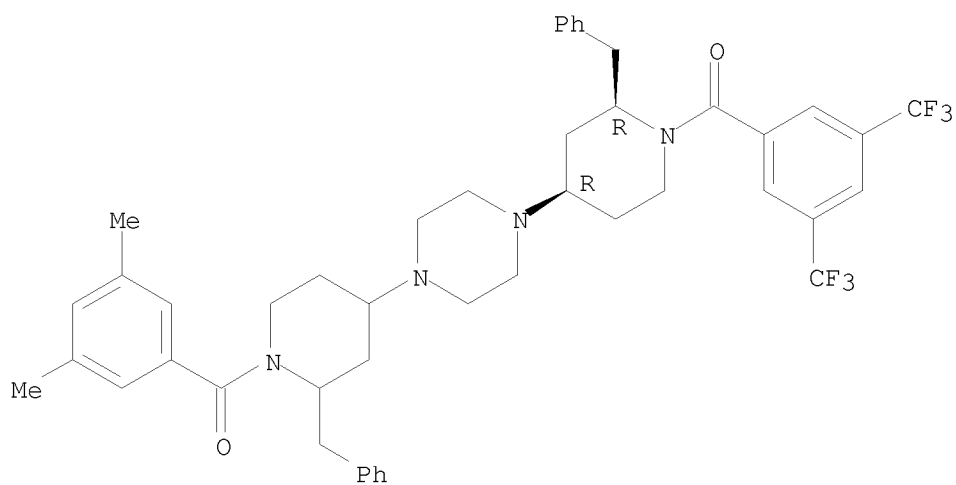
Absolute stereochemistry.



RN 681290-38-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4R)-rel- (9CI) (CA INDEX NAME)

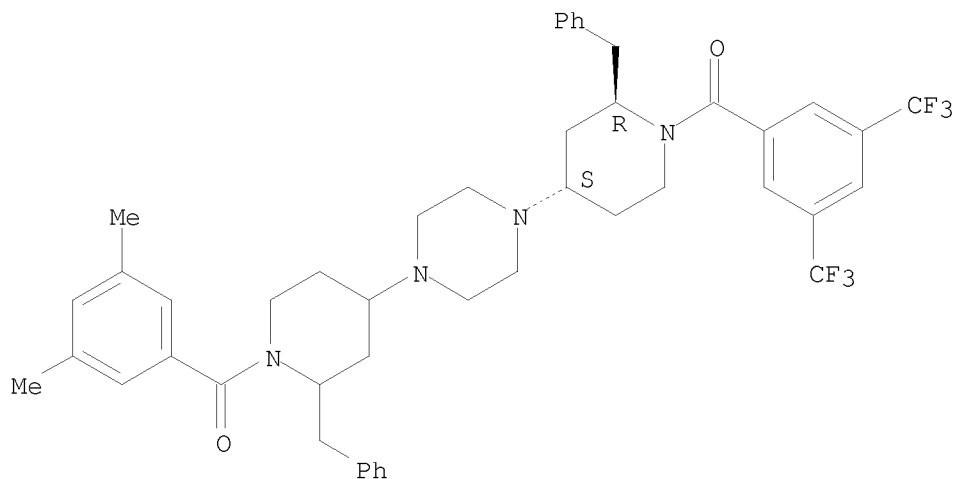
Relative stereochemistry.



RN 681290-39-1 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

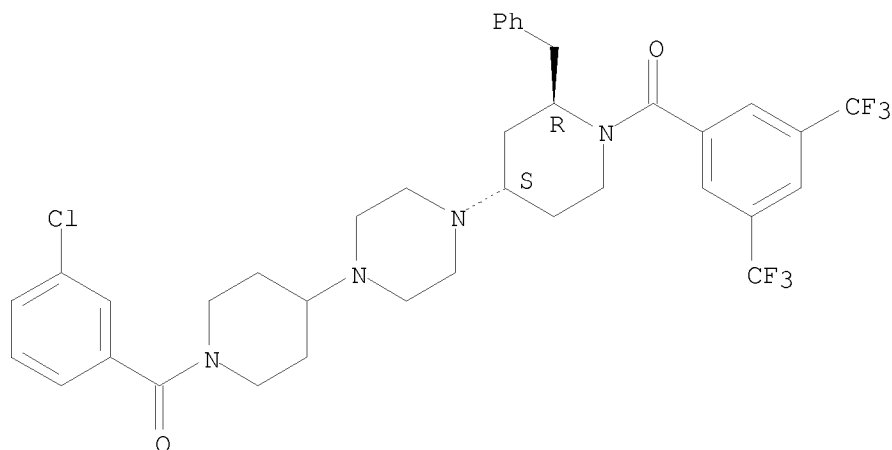
Relative stereochemistry.



RN 681290-58-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

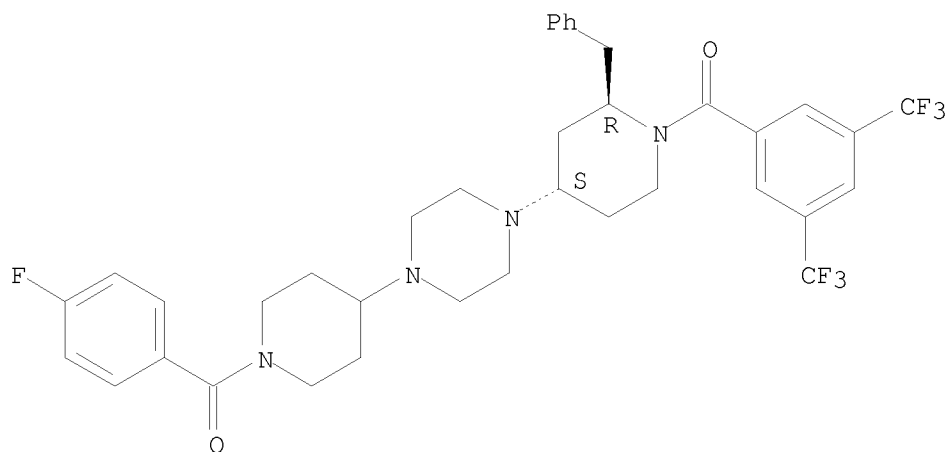
Absolute stereochemistry.



RN 681290-59-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(4-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

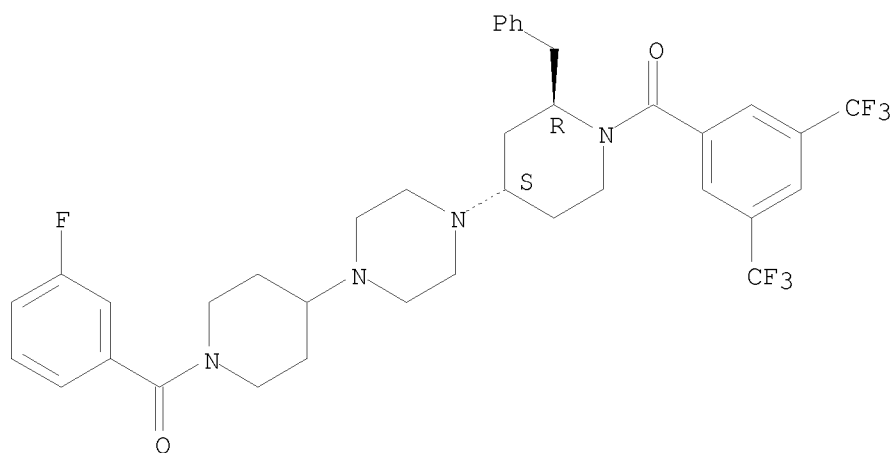
Absolute stereochemistry.



RN 681290-60-8 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

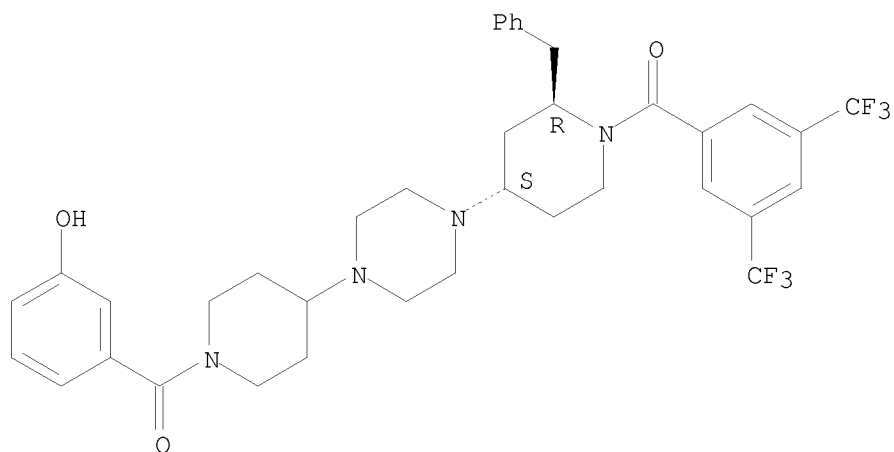
Absolute stereochemistry.



RN 681290-61-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

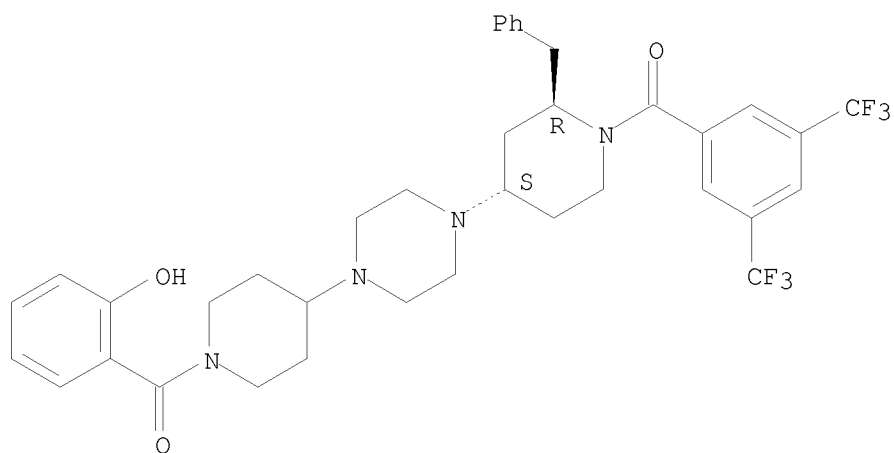
Absolute stereochemistry.



RN 681290-62-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

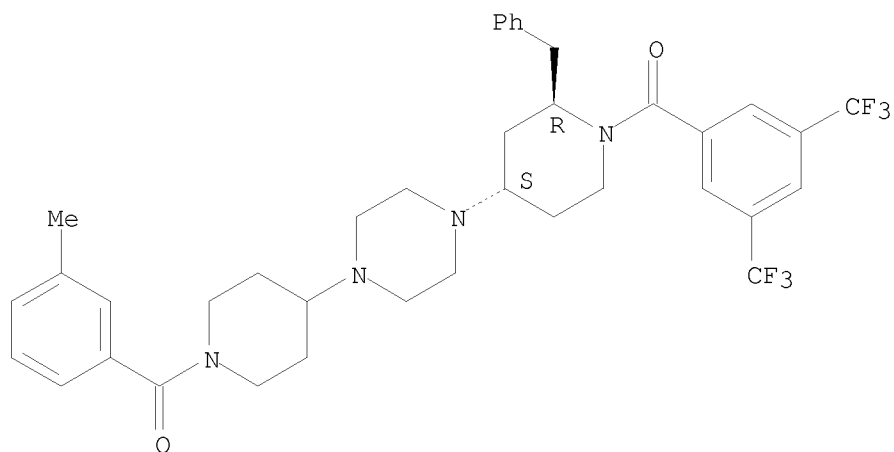
Absolute stereochemistry.



RN 681290-63-1 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

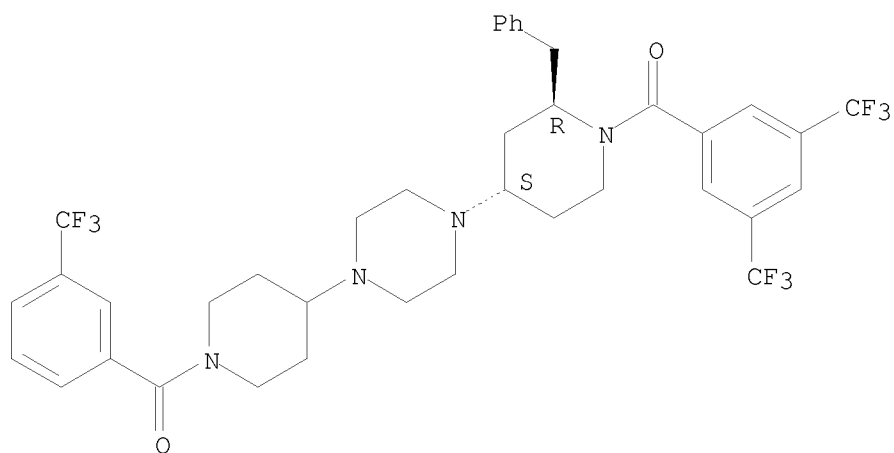
Absolute stereochemistry.



RN 681290-64-2 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(trifluoromethyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)-  
(9CI) (CA INDEX NAME)

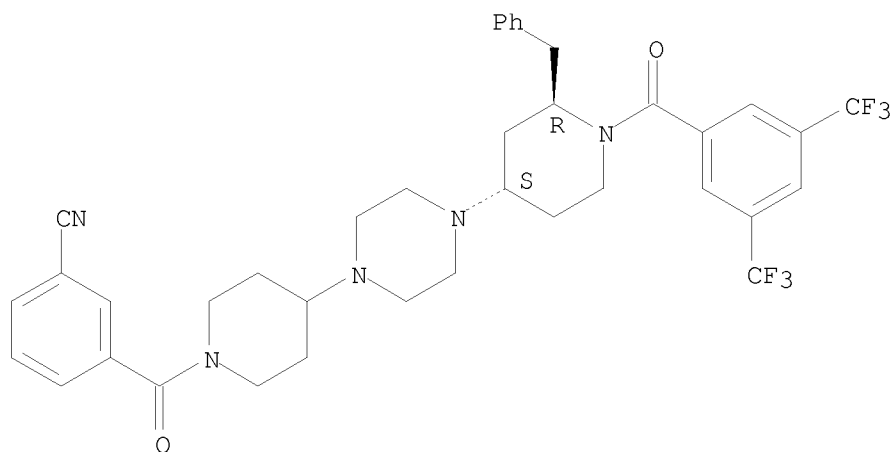
Absolute stereochemistry.



RN 681290-65-3 HCAPLUS

CN Benzonitrile, 3-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]- (CA  
INDEX NAME)

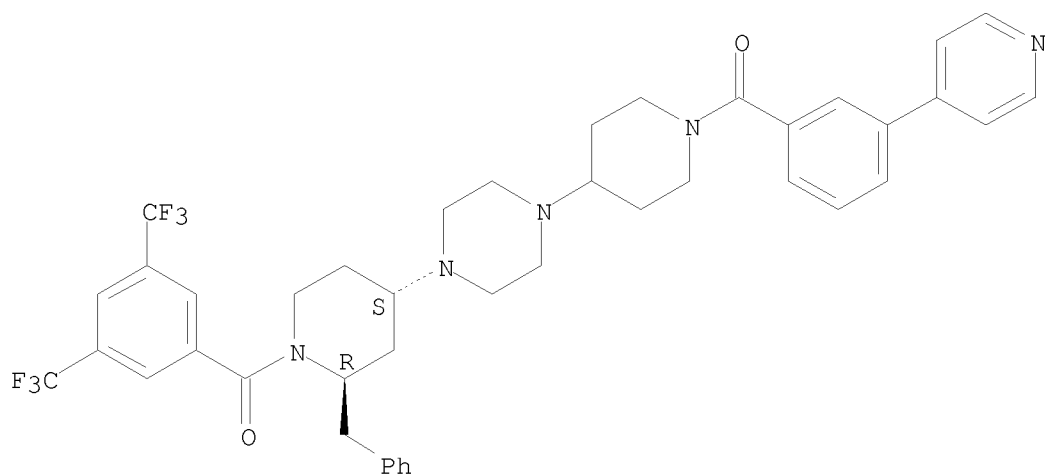
Absolute stereochemistry.



RN 681290-66-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(4-pyridinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

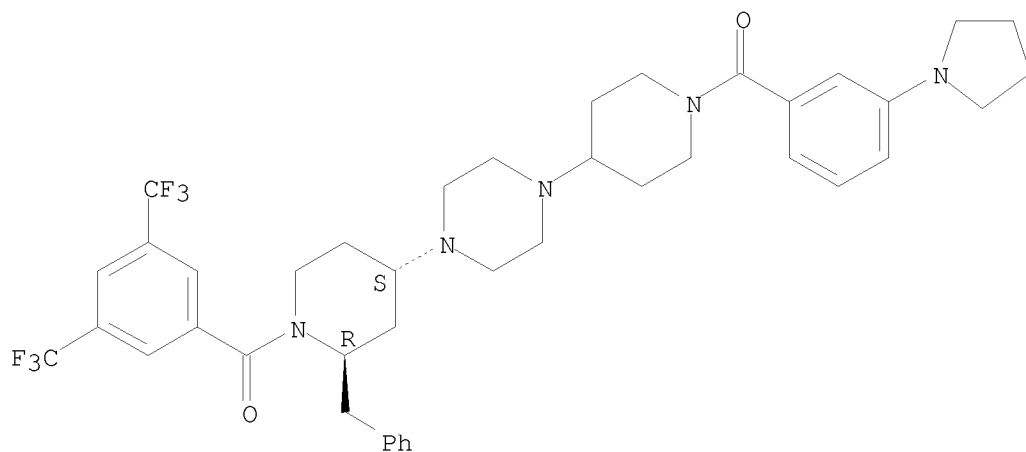
Absolute stereochemistry.



RN 681290-67-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

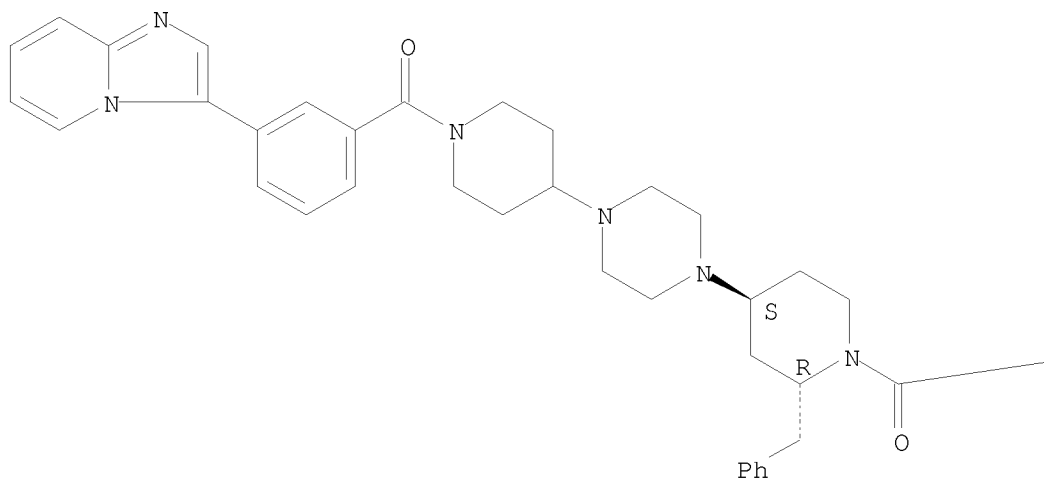


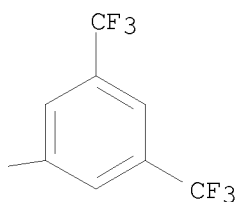
RN 681290-68-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-imidazo[1,2-a]pyridin-3-ylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

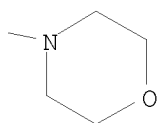
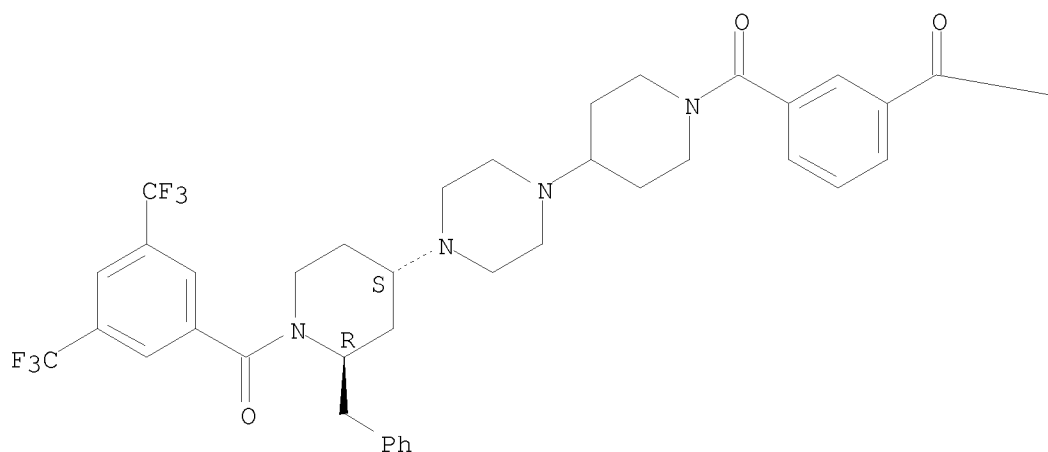




RN 681290-69-7 HCAPLUS

CN Methanone, [4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl][3-(4-morpholinylcarbonyl)phenyl]- (CA INDEX NAME)

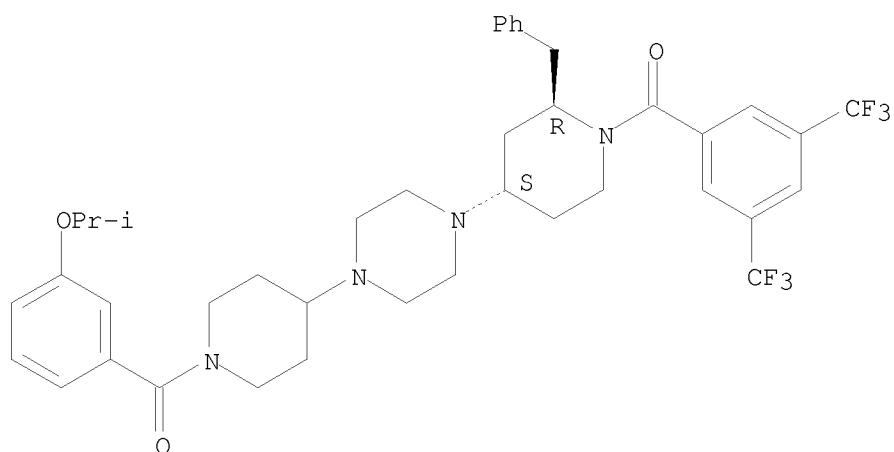
Absolute stereochemistry.



RN 681290-70-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[3-(1-methylethoxy)benzoyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

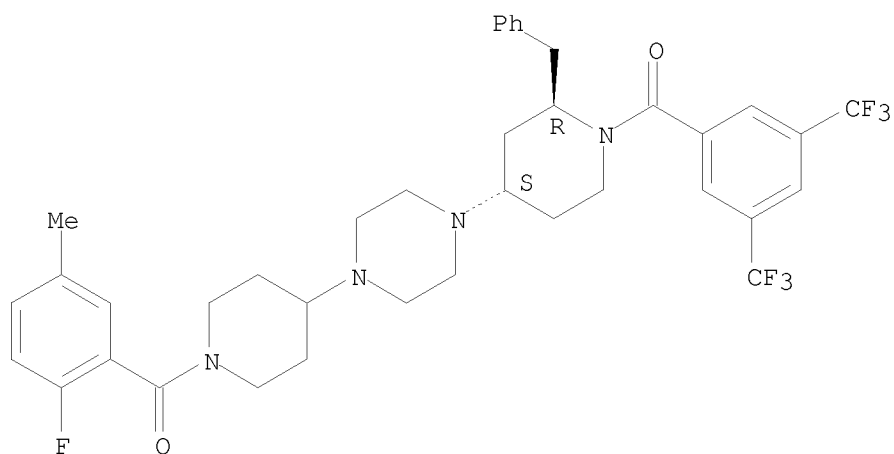
Relative stereochemistry.



RN 681290-71-1 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-fluoro-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

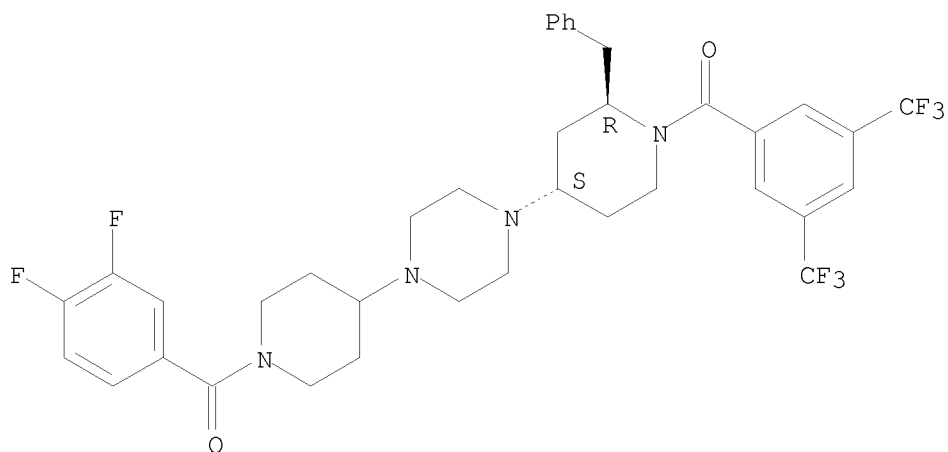
Absolute stereochemistry.



RN 681290-72-2 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,4-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

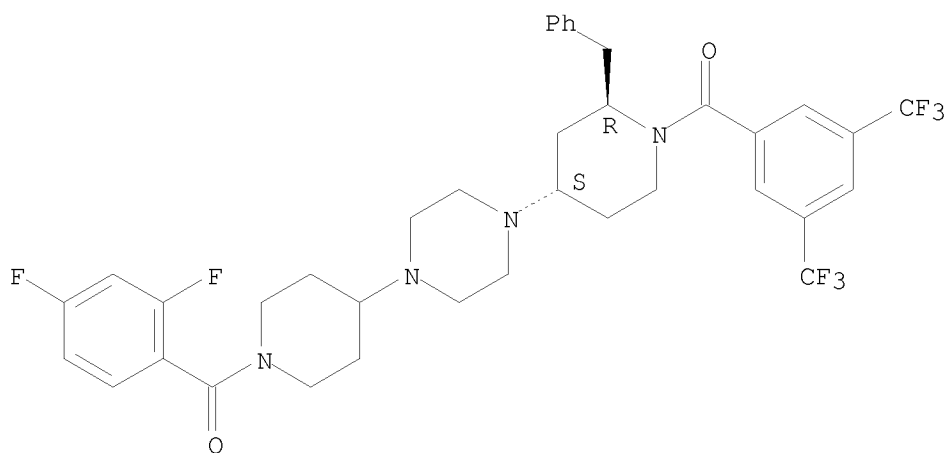
Absolute stereochemistry.



RN 681290-73-3 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,4-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

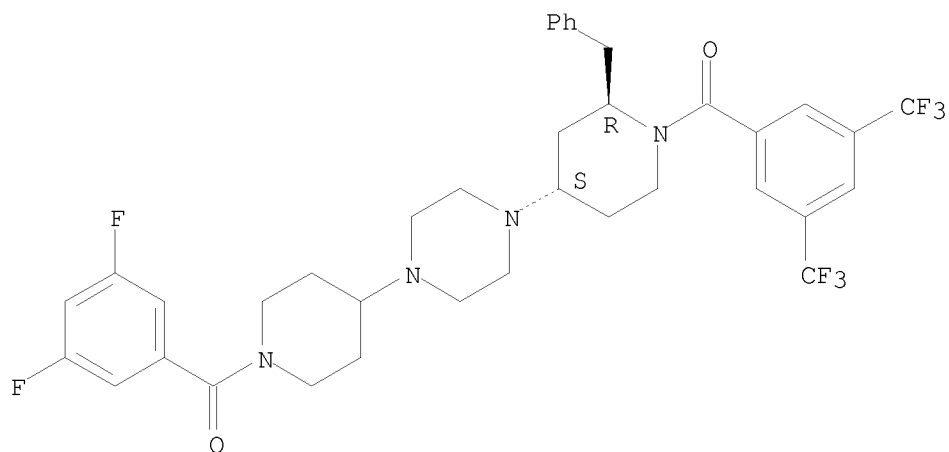
Absolute stereochemistry.



RN 681290-74-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

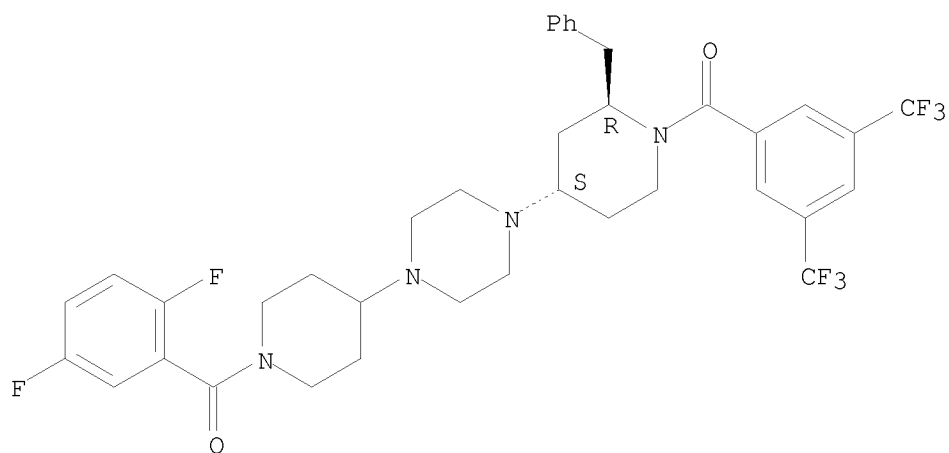
Absolute stereochemistry.



RN 681290-75-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

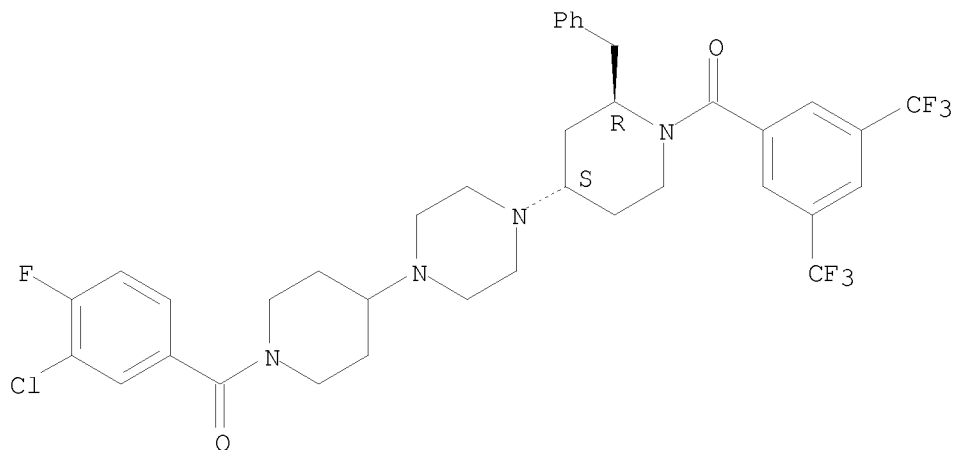
Absolute stereochemistry.



RN 681290-76-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chloro-4-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-(9CI) (CA INDEX NAME)

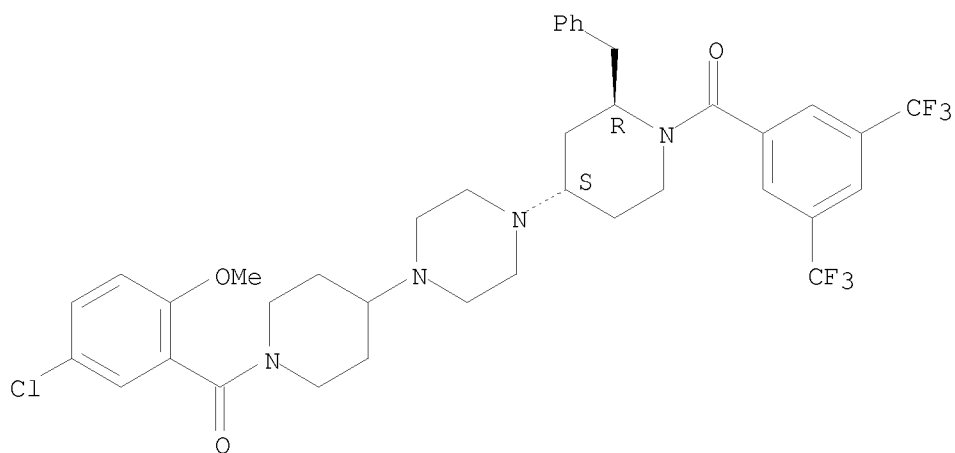
Absolute stereochemistry.



RN 681290-77-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

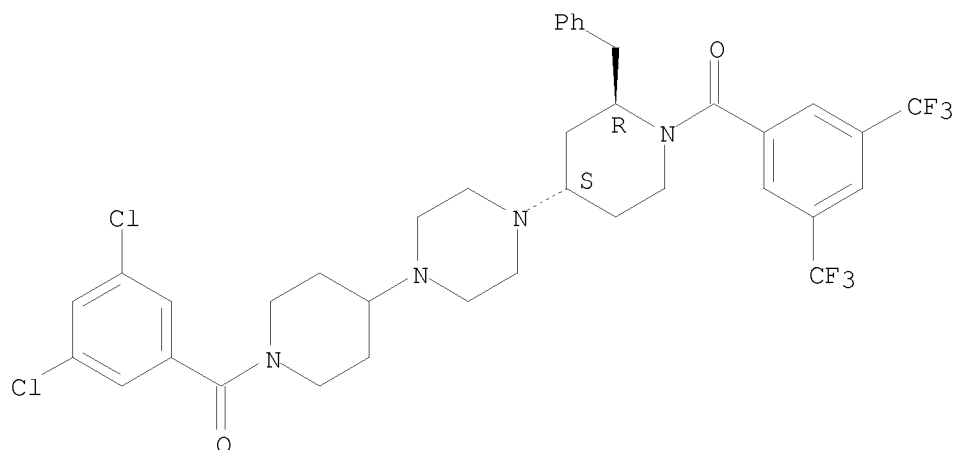
Absolute stereochemistry.



RN 681290-78-8 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dichlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

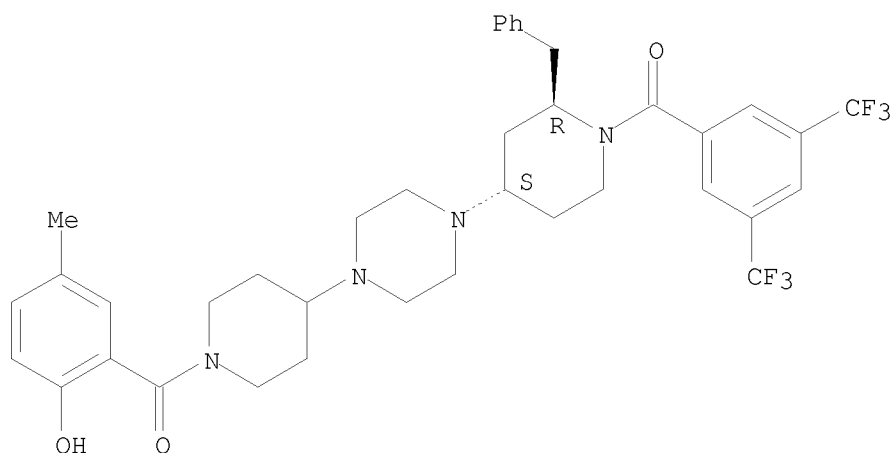
Absolute stereochemistry.



RN 681290-79-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxy-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

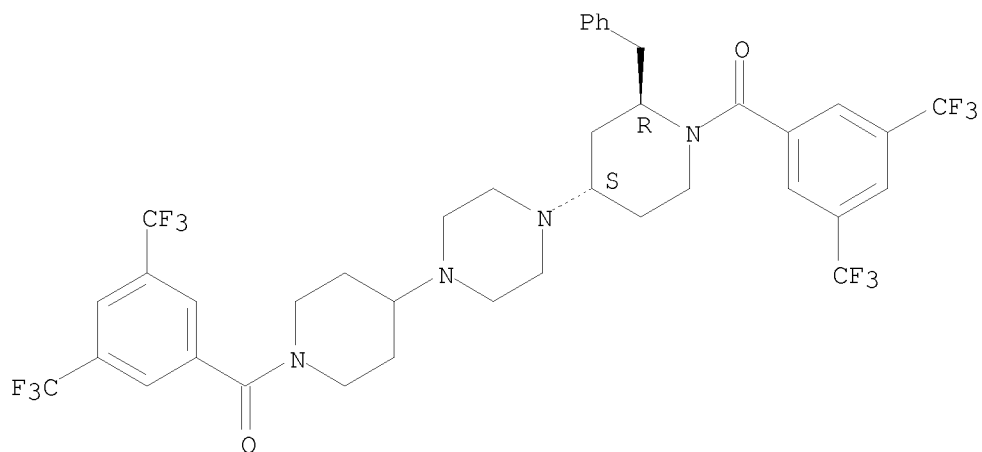
Absolute stereochemistry.



RN 681290-80-2 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[3,5-bis(trifluoromethyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

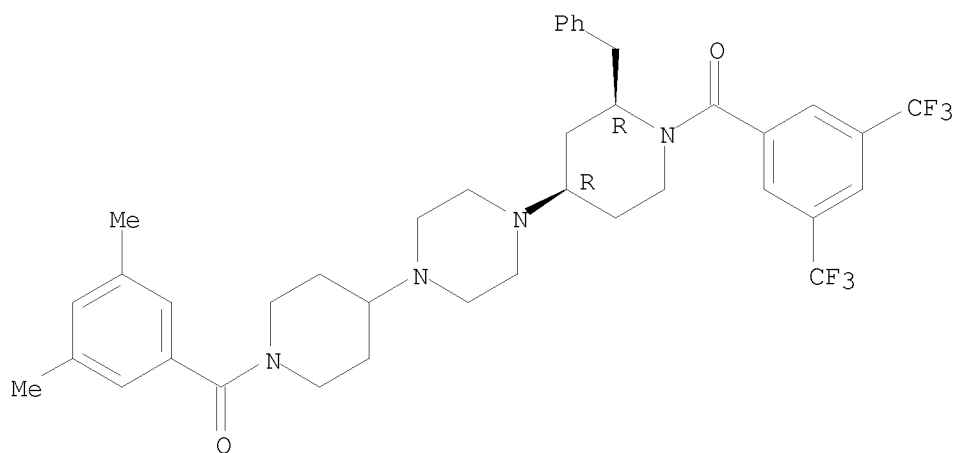
Relative stereochemistry.



RN 681290-81-3 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4R)-(9CI) (CA INDEX NAME)

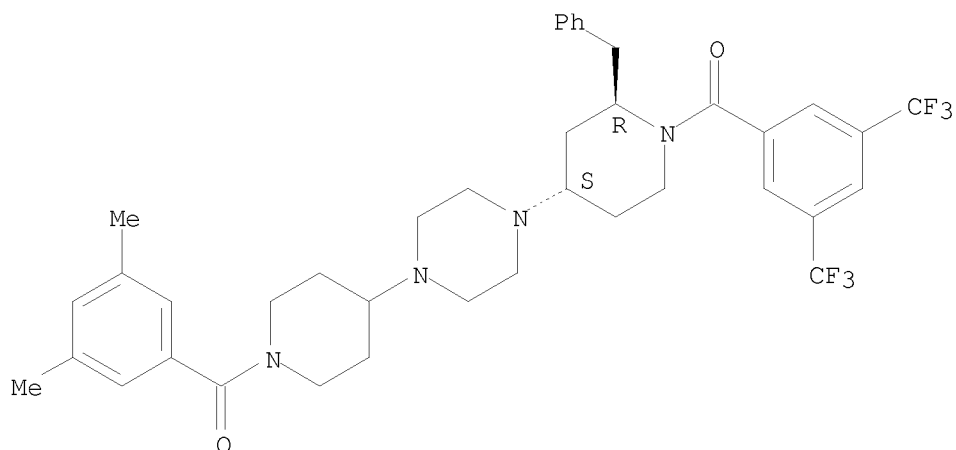
Absolute stereochemistry.



RN 681290-82-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)-rel- (9CI) (CA INDEX NAME)

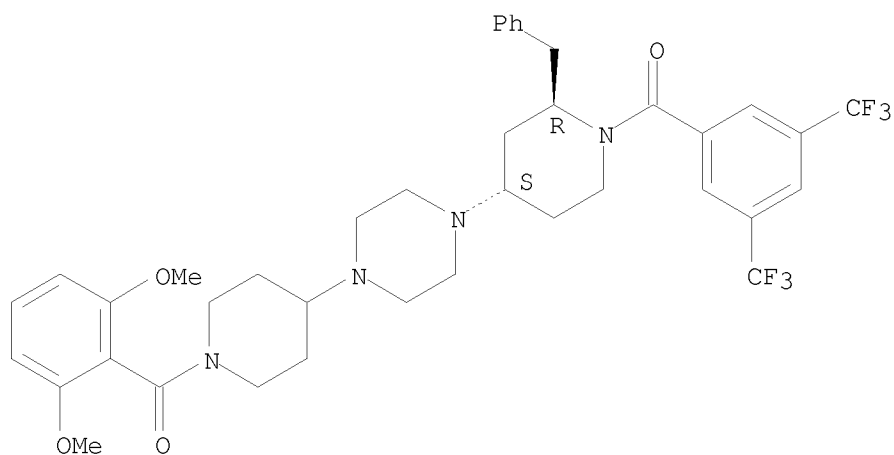
Relative stereochemistry.



RN 681290-83-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,6-dimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

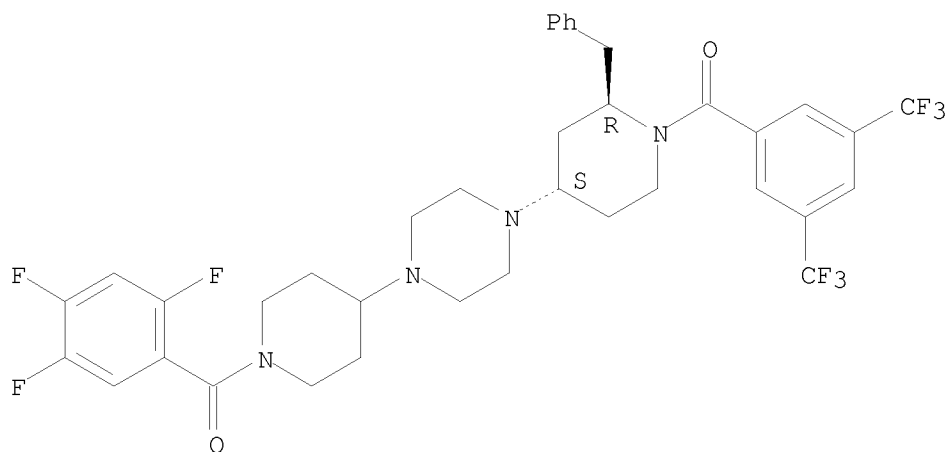
Absolute stereochemistry.



RN 681290-84-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(2,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

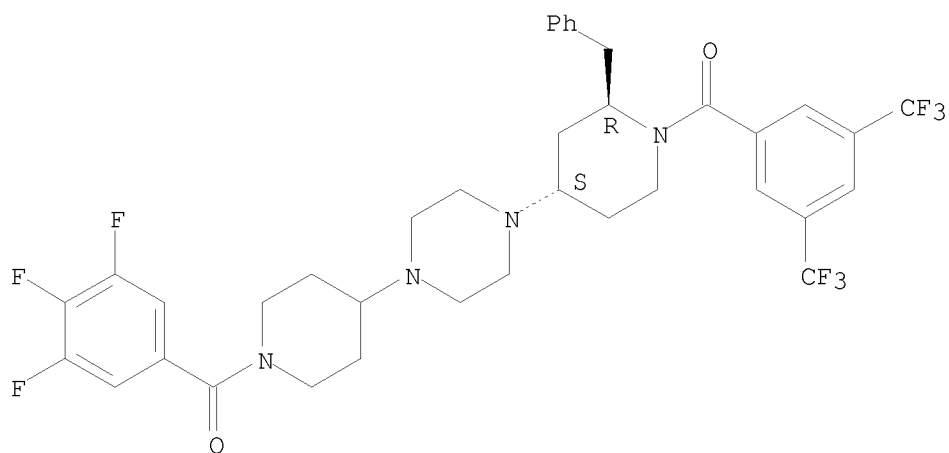
Absolute stereochemistry.



RN 681290-85-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

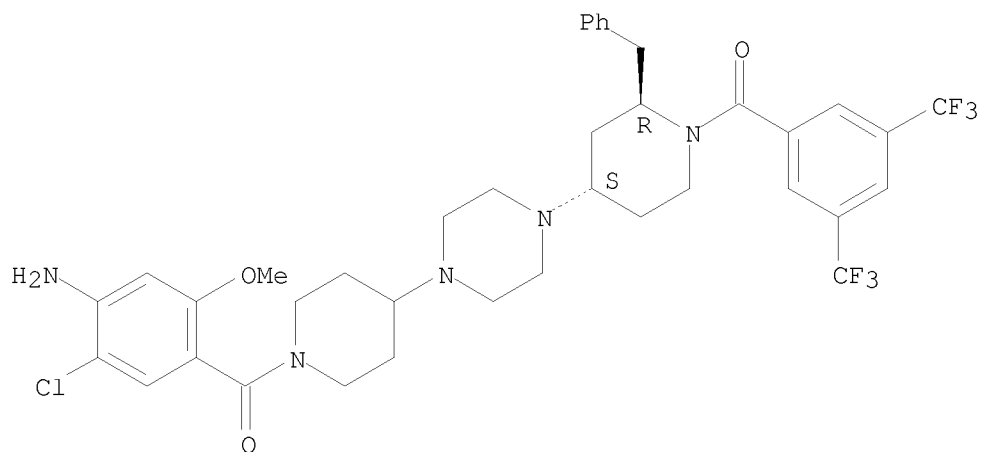
Absolute stereochemistry.



RN 681290-86-8 HCAPLUS

CN Piperidine, 4-[4-[1-(4-amino-5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

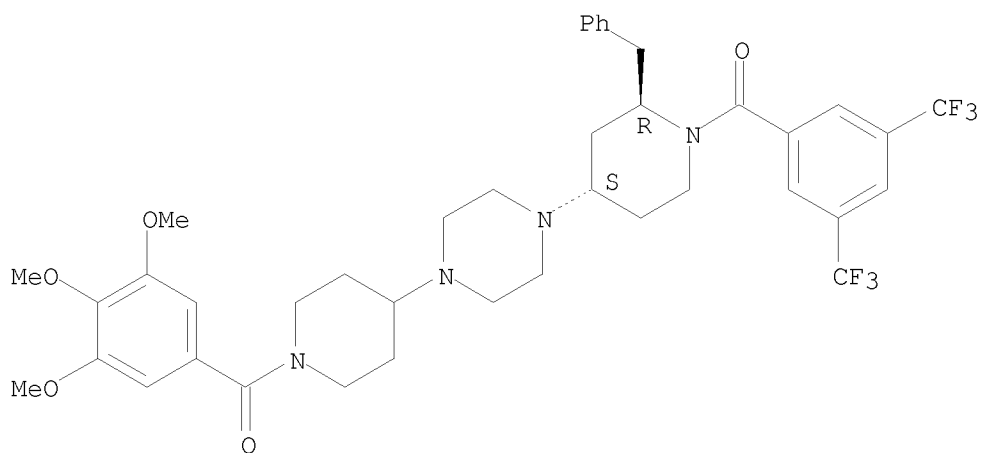
Absolute stereochemistry.



RN 681290-87-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

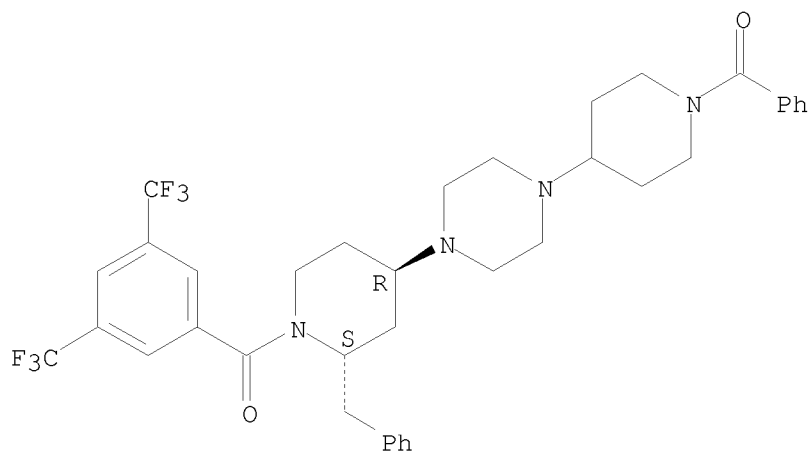
Absolute stereochemistry.



RN 681291-44-1 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4R)- (9CI) (CA INDEX NAME)

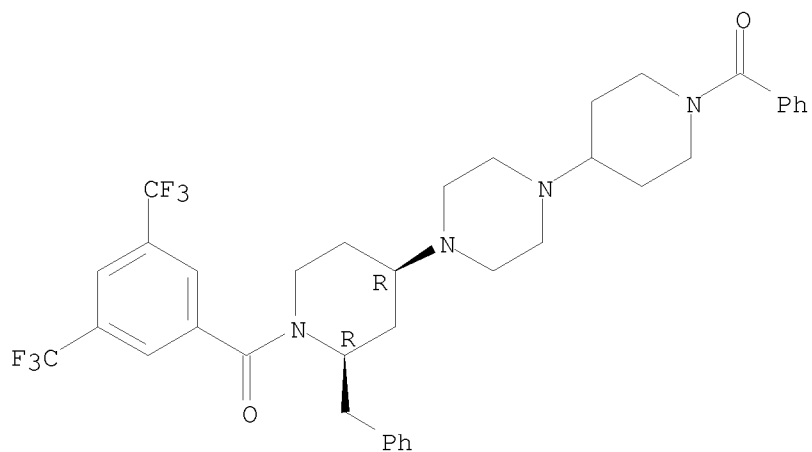
Absolute stereochemistry.



RN 681291-45-2 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidiny1)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4R)- (9CI) (CA INDEX NAME)

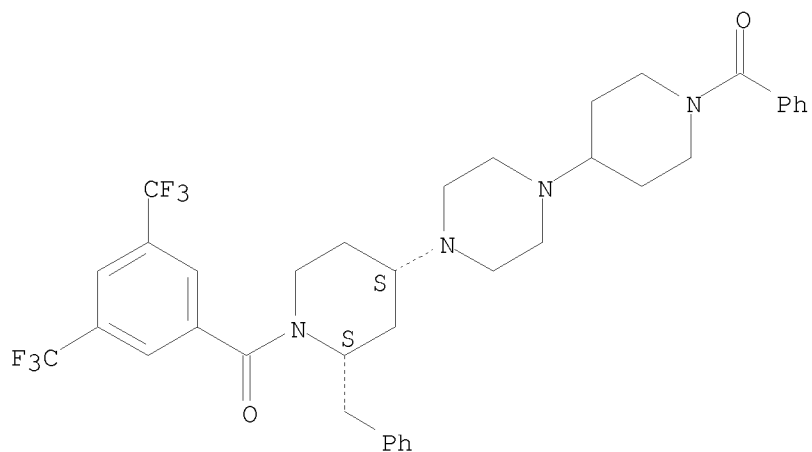
Absolute stereochemistry.



RN 681291-46-3 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidiny1)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2S,4S)- (9CI) (CA INDEX NAME)

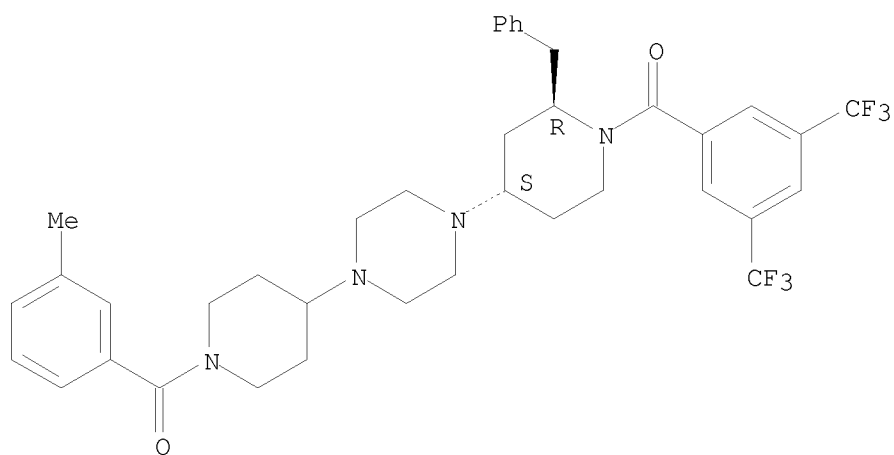
Absolute stereochemistry.



RN 681291-47-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, dihydrochloride, (2R,4S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

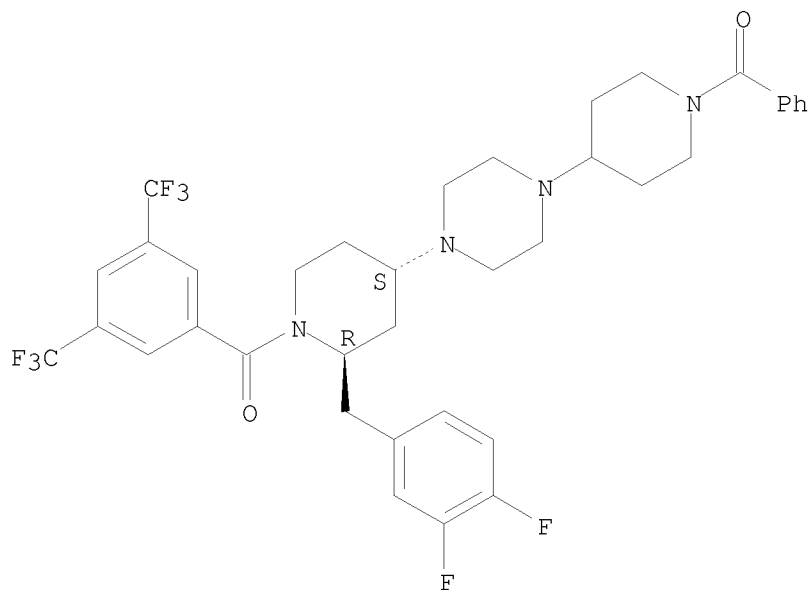


● 2 HCl

RN 681291-69-0 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-[(3,4-difluorophenyl)methyl]-, (2R,4S)-(9CI) (CA INDEX NAME)

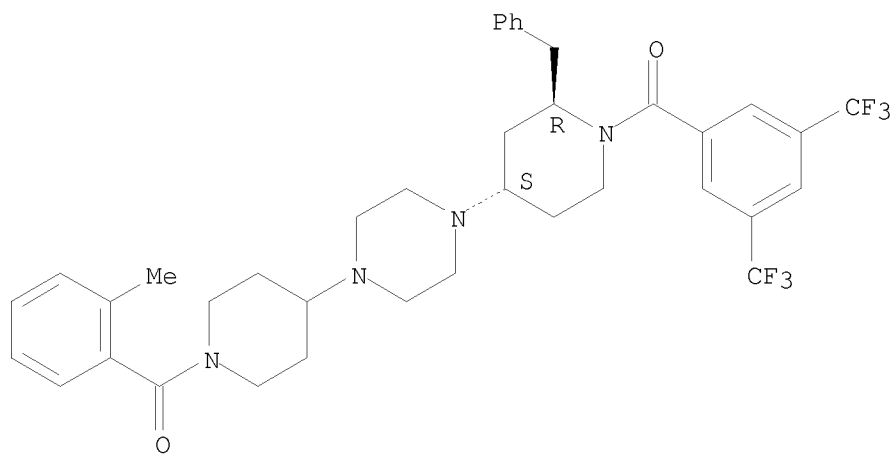
Absolute stereochemistry.



RN 681291-75-8 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

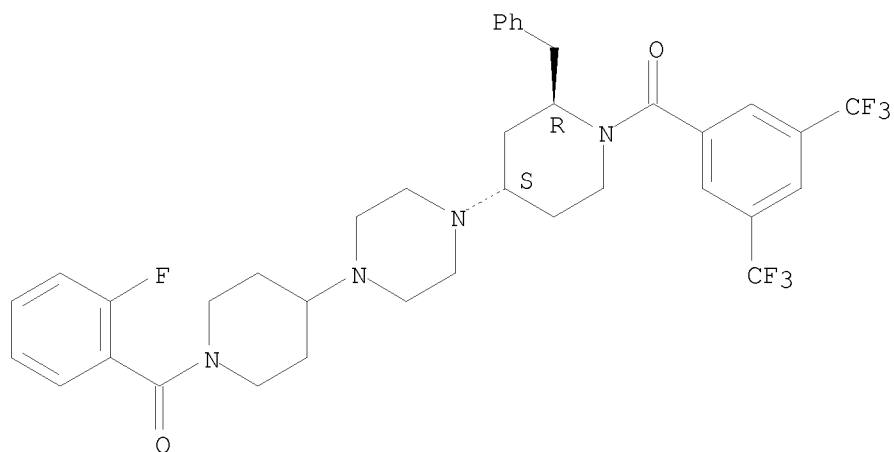
Absolute stereochemistry. Rotation (-).



RN 681291-76-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-fluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

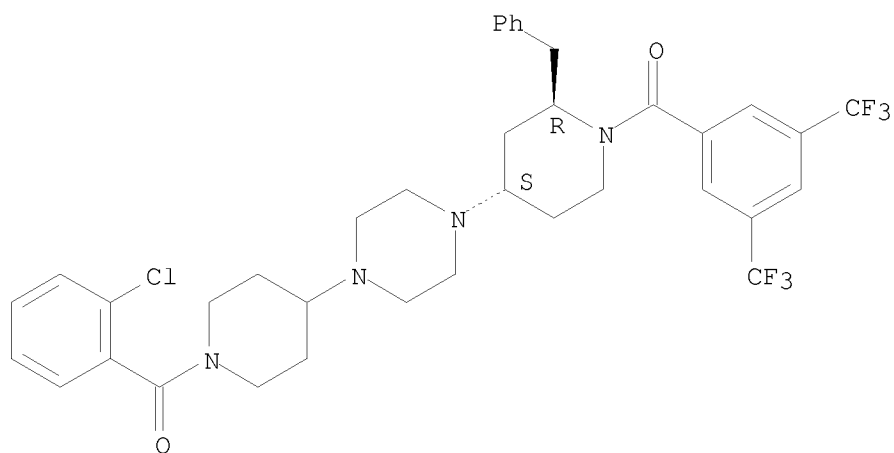
Absolute stereochemistry. Rotation (-).



RN 681291-77-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-chlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

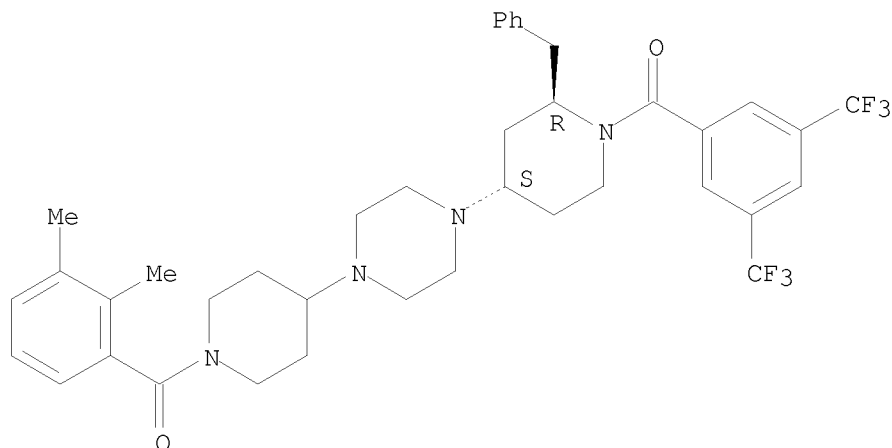
Absolute stereochemistry. Rotation (-).



RN 681291-82-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2,3-dimethylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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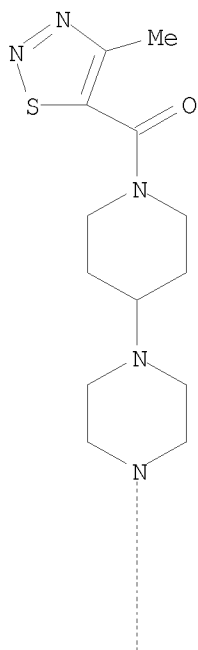
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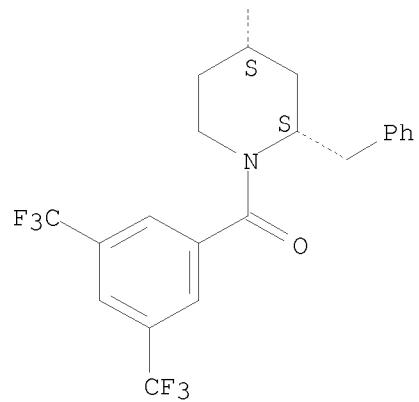
L7 223 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
 IN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[(4-methyl-1,2,3-  
 thiadiazol-5-yl)carbonyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-,  
 (2S,4S)- (9CI)  
 MF C34 H38 F6 N6 O2 S

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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9047000 NRS=3

L8 9 L7 AND NRS=3

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L9 171 L7 AND NRS>3

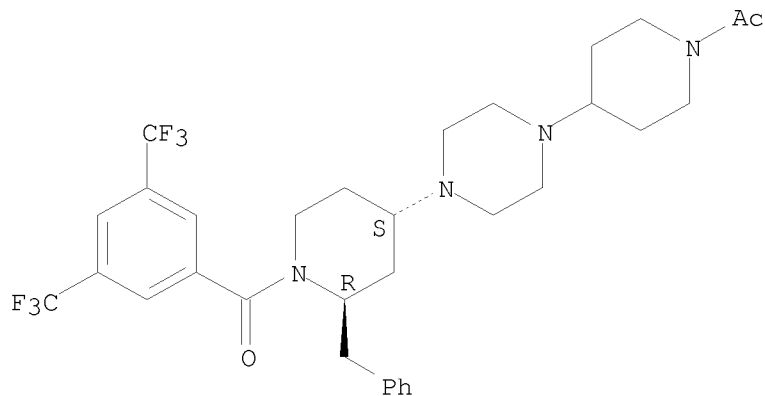
=> s 18 or 19

L10 180 L8 OR L9

=> d scan

L10 180 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
IN Ethanone, 1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-  
MF C32 H38 F6 N4 O2

Absolute stereochemistry.

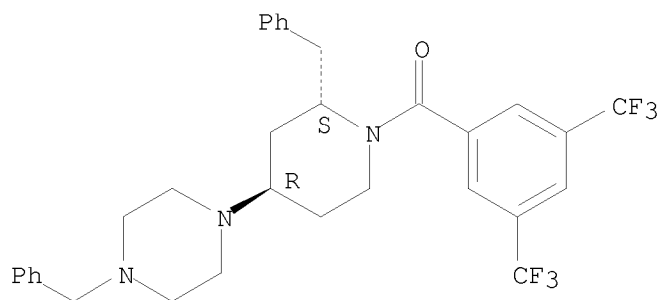


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1): 1

L10 180 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
IN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]-, rel-  
MF C32 H33 F6 N3 O  
CI COM

Relative stereochemistry.

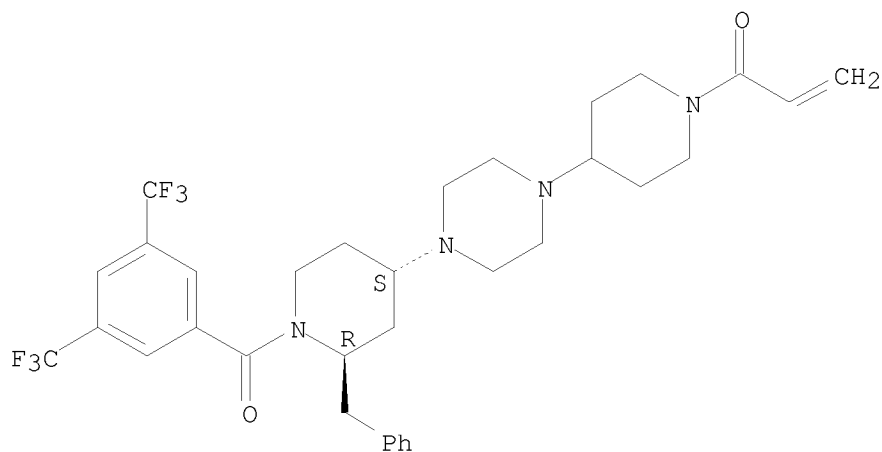


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L10 180 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
IN 2-Propen-1-one, 1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-  
MF C33 H38 F6 N4 O2

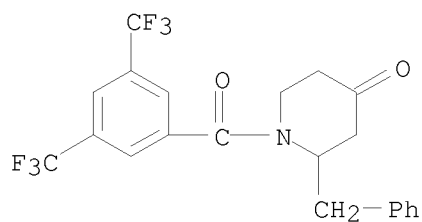
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L10 180 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN  
IN 4-Piperidinone, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-  
MF C21 H17 F6 N O2



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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FILE 'REGISTRY' ENTERED AT 15:55:34 ON 28 AUG 2008  
L1 STRUCTURE UPLOADED  
L2 46 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 16:00:15 ON 28 AUG 2008  
L3 3 S L2

FILE 'REGISTRY' ENTERED AT 16:01:45 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:01:46 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:01:54 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:01:58 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:02:33 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:02:35 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:03:13 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:03:33 ON 28 AUG 2008  
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L5 0 S US20060128721\PN  
L6 1 S US20060128721\PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 16:07:36 ON 28 AUG 2008  
L7 223 S E1-E223  
L8 9 S L7 AND NRS=3  
L9 171 S L7 AND NRS>3  
L10 180 S L8 OR L9

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	24.10	361.14
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-2.40

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FILE COVERS 1907 - 28 Aug 2008 VOL 149 ISS 9  
FILE LAST UPDATED: 27 Aug 2008 (20080827/ED)

HCAplus now includes complete International Patent Classification (IPC)

reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L11 1598 L9

=> s 111 not (2008/so or 2007/so or 2006/so or 2005/so or 2004/so)

542123 2008/SO

955898 2007/SO

944588 2006/SO

884675 2005/SO

849668 2004/SO

L12 1286 L11 NOT (2008/SO OR 2007/SO OR 2006/SO OR 2005/SO OR 2004/SO)

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22958829 PY<2003

4496430 AY<2003

3964692 PRY<2003

L13 279 L12 AND (PY<2003 AND AY<2003 AND PRY<2003)

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L13 ANSWER 250 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts containing, for conversion of methanol to aldehydes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1983:71489 HCAPLUS

DOCUMENT NUMBER: 98:71489

ORIGINAL REFERENCE NO.: 98:10927a,10930a

TITLE: Selectively producing aldehydes

INVENTOR(S): Habib, Mohammad M.; Pretzer, Wayne R.

PATENT ASSIGNEE(S): Gulf Research and Development Co. , USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4361707	A	19821130	US 1981-289418	19810803 <--
ZA 8204921	A	19830525	ZA 1982-4921	19820709 <--
CA 1186334	A1	19850430	CA 1982-408419	19820729 <--
FR 2510555	A1	19830204	FR 1982-13488	19820802 <--
JP 58026835	A	19830217	JP 1982-135059	19820802 <--
DE 3228822	A1	19830224	DE 1982-3228822	19820802 <--
PRIORITY APPLN. INFO.:			US 1981-289418	A 19810803 <--

OTHER SOURCE(S): MARPAT 98:71489

AB Aldehydes, particularly MeCHO, were prepared by the reaction of MeOH with CO and H at elevated temperature and pressure in the presence of Co, iodine, and a

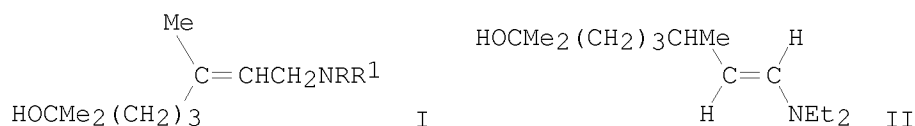
P-containing ligand. Thus, a mixture of 100 mL MeOH, 10 mmol cobaltous acetylacetonate, iodine, Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>, CO, and H (Co:ligand = 2:1; Co:iodine = 1:2; CO:H = 1:1) was heated at 200° and 4000 psig for 1.0 h to give 66% conversion of MeOH. The liquid product contained MeCHO 30.4, MeCH(OMe)<sub>2</sub> 1.1, EtCHO 1.2, MeOAc 28.7, PrCHO 7.8, and Me<sub>2</sub>O 7.4%.

L13 ANSWER 251 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, containing palladium nitrate and sodium phenoxide, for isomerization of hydroxygeranylamine)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1982:598413 HCAPLUS  
 DOCUMENT NUMBER: 97:198413  
 ORIGINAL REFERENCE NO.: 97:33237a,33240a  
 TITLE: Hydroxycitronellal  
 INVENTOR(S): Akatsuagawa, Susumu; Taketomi, Takanao  
 PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan  
 SOURCE: Brit. UK Pat. Appl., 6 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2088355	A	19820609	GB 1980-38320	19801128 <--
GB 2088355	B	19840830		
PRIORITY APPLN. INFO.:			GB 1980-38320	19801128 <--
GI				



AB 7-Hydroxycitronellal was prepared by isomerizing 7-hydroxygeranyl- or -nerylamines (I; R, R<sub>1</sub> = alkyl; NRR<sub>1</sub> = heterocyclyl) in the presence of a divalent Pd compound and a phosphine, followed by hydrolysis of the resulting enamine. Thus, heating E-I (R = R<sub>1</sub> = Et), Pd(NO<sub>3</sub>)<sub>2</sub>, Ph<sub>3</sub>P, NaOPh, and THF at 150° 15 h gave the enamine II, which was hydrolyzed with 2 N H<sub>2</sub>SO<sub>4</sub> to give 78% 7-hydroxycitronellal.

L13 ANSWER 252 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (stabilization of rhodium carbonylation catalysts by)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1982:597857 HCAPLUS  
DOCUMENT NUMBER: 97:197857  
ORIGINAL REFERENCE NO.: 97:33129a,33132a  
TITLE: Carbonylation employing a catalyst stabilized in  
soluble form  
INVENTOR(S): Singleton, Thomas Clark; Urry, Wilbert Herbert;  
Paulik, Frank Edward  
PATENT ASSIGNEE(S): Monsanto Co. , USA  
SOURCE: Eur. Pat. Appl., 32 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 55618	A1	19820707	EP 1981-306130	19811224 <--
EP 55618	B1	19850925		
R: DE, FR, GB, IT				
US 4433165	A	19840221	US 1980-221230	19801229 <--
US 4433166	A	19840221	US 1980-221231	19801229 <--
CA 1180724	A1	19850108	CA 1981-393228	19811224 <--
CA 1180725	A1	19850108	CA 1981-393239	19811224 <--
CA 1182477	A1	19850212	CA 1981-393217	19811224 <--
JP 57134436	A	19820819	JP 1981-210089	19811228 <--
JP 63046735	B	19880919		
US 4733006	A	19880322	US 1983-524508	19830818 <--
PRIORITY APPLN. INFO.:			US 1980-221228	A 19801229 <--
			US 1980-221229	A 19801229 <--
			US 1980-221230	A 19801229 <--
			US 1980-221231	A 19801229 <--
			US 1980-221232	A 19801229 <--

OTHER SOURCE(S): MARPAT 97:197857

AB Carbonylation of alcs., esters, halides, or ethers was accomplished by treating the compound with CO in the liquid phase in a reaction zone in the presence of a catalyst containing a Rh component, an iodide or bromide, and passing the liquid reaction mass in which the CO has been depleted into a separation zone. Before recycling the reaction mass from the separation zone,

a stabilizer component is added: (1) N,N,N',N'-tetramethyl-o-phenylenethiamine or 2,3'-dipyridol (2) diphosphine RR1PQPR2R3 (R,R1,R2,R3 = C1-20 alkyl or aryl; Q = C1-3 polymethylene) (3) dibasic or polybasic carboxylic acid HO2CYCO2H or (HO2CY1)N(Y2CO2H)YN(Y3CO2H)Y4CO2H) [Y = (CX1X2)m (m = 2-10); Y1, Y2, Y3, Y4 = (CX1X2)n (n = 1-10; X1, X2 = H, halo, lower alkyl, aryl, OH, CO2H, NH2, etc.)] (4) Ge, Sb, Sn, or alkali metal compound For example, when MeOH and MeI were added to a Rh solution with HI in an autoclave pressured with CO at 710 kPa at 185°, the Rh rapidly precipitated from the solution Stabilizers such as bis(1,3-diphenylphosphino)propane, ethylenediamine tetraacetic acid, succinic acid, KI, GeI4, SbCl3, and SnBu4 retarded the rate of Rh precipitation from the autoclave solution

L13 ANSWER 253 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(homologation catalyst containing, for methanol with synthesis gas)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1982:597832 HCAPLUS  
DOCUMENT NUMBER: 97:197832  
ORIGINAL REFERENCE NO.: 97:33125a,33128a  
TITLE: Ethanol and n-propanol from methanol  
INVENTOR(S): Cornils, Boy; Frohning, Carl Dieter; Diekhaus, Gerhard; Wiebus, Ernst; Bahrmann, Helmut  
PATENT ASSIGNEE(S): Ruhrchemie A.-G., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 16 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3042434	A1	19820519	DE 1980-3042434	19801111 <--
JP 57108027	A	19820705	JP 1981-175852	19811104 <--
JP 59018371	B	19840426		
EP 51859	A1	19820519	EP 1981-109524	19811105 <--
EP 51859	B1	19840725		
R: BE, CH, DE, FR, GB, IT, NL, SE				
PL 129922	B1	19840630	PL 1981-233685	19811105 <--
AU 8177349	A	19820520	AU 1981-77349	19811110 <--
AU 546606	B2	19850912		
BR 8107292	A	19820803	BR 1981-7292	19811110 <--
US 4424383	A	19840103	US 1981-320008	19811110 <--
CA 1189538	A1	19850625	CA 1981-389834	19811110 <--
PRIORITY APPLN. INFO.:			DE 1980-3042434	A 19801111 <--

AB EtOH and PrOH were prepared by homologation of MeOH with CO and H<sub>2</sub> at 150-250°/200-600 bar in the presence of 5-25% H<sub>2</sub>O (based on MeOH) and a catalyst containing a Co compound, a Ru compound, iodine or an iodide, and  
R<sub>3</sub>Oa(R<sub>4</sub>Oa)POa(CH<sub>2</sub>)<sub>n</sub>OaP(OaR<sub>1</sub>)OaR<sub>2</sub> (R<sub>1</sub>-R<sub>4</sub> independently = H, C<sub>1</sub>-16 alkyl, C<sub>6</sub>-15 aryl, a = 0, 1; n = 1-6). A mixture of MeOH, H<sub>2</sub>O, CoCO<sub>3</sub>, NaI, (Ph<sub>2</sub>PCH<sub>2</sub>)<sub>2</sub>CH<sub>2</sub>, and RuCl<sub>3</sub> was treated with 1:3 CO-H<sub>2</sub> at 185°/550 bar 6 h to give a mixture containing MeOH 47.7, EtOH 40.7, PrOH 2.3% and miscellaneous other components.

L13 ANSWER 254 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalyst from palladium complex, phenoxides, and, for isomerization of hydroxygeranylamine in preparation of hydroxycitronellal)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1982:527837 HCAPLUS  
DOCUMENT NUMBER: 97:127837  
ORIGINAL REFERENCE NO.: 97:21228h,21229a  
TITLE: Hydroxycitronellal

INVENTOR(S): Akutagawa, Susumu; Taketomi, Takanao  
 PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd. , Japan  
 SOURCE: Ger. Offen., 15 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3044760	A1	19820603	DE 1980-3044760	19801127 <--
DE 3044760	C2	19830217		
FR 2495136	A1	19820604	FR 1980-25341	19801128 <--
FR 2495136	B1	19840713		
US 4347387	A	19820831	US 1980-212964	19801204 <--
			DE 1980-3044760	19801127 <--

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 97:127837

AB 7-Hydroxycitronellal (I) was prepared by isomerization of (E)- or (Z)-HOCMe<sub>2</sub>(CH<sub>3</sub>)<sub>3</sub>CMe:CHCH<sub>2</sub>NRR1 (II, R, R1 = alkyl or NRR1 = heterocyclyl) in the presence of a Pd(II)-phosphine complex and hydrolysis of the resulting HOCMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>CHMeCH:CHNRR1 (III). Thus, treatment of 100 g (E)-II (R = R1 = Et) with a catalyst prepared from 30 mg Pd(NO<sub>3</sub>)<sub>2</sub>, 59 mg Ph<sub>3</sub>P, and 66 mg NaOPh gave, after deactivation of the catalyst and distillation, 91 g III (R, R1 = Et), whose hydrolysis with 2N H<sub>2</sub>SO<sub>4</sub> gave 59 g I.

L13 ANSWER 255 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
 (catalysts containing, for homologation of methanol)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1982:527036 HCAPLUS  
 DOCUMENT NUMBER: 97:127036  
 ORIGINAL REFERENCE NO.: 97:21077a,21080a  
 TITLE: Ethanol and n-propanol from methanol  
 INVENTOR(S): Cornils, Boy; Frohning, Carl Dieter; Diekhaus, Gerhard; Wiebus, Ernst; Bahrmann, Helmut  
 PATENT ASSIGNEE(S): Ruhrchemie A.-G., Fed. Rep. Ger.  
 SOURCE: Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 53792	A1	19820616	EP 1981-110066	19811202 <--
EP 53792	B1	19830629		
R: BE, CH, DE, FR, GB, IT, NL, SE				
DE 3046481	A1	19820722	DE 1980-3046481	19801210 <--
JP 57122028	A	19820729	JP 1981-193774	19811203 <--
JP 59017090	B	19840419		
PL 131169	B1	19841031	PL 1981-234088	19811204 <--
BR 8107996	A	19820914	BR 1981-7996	19811209 <--

US 4355192	A	19821019	US 1981-328984	19811209 <--
AU 8178399	A	19821104	AU 1981-78399	19811209 <--
AU 542669	B2	19850228		
CA 1170278	A1	19840703	CA 1981-391846	19811209 <--

PRIORITY APPLN. INFO.: DE 1980-3046481 A 19801210 <--

AB EtOH and PrOH were prepared from MeOH, CO, and H at 150-250° and high pressure in the presence of a catalyst containing Co, Pt, a halogen or a halide, and a bidentate phosphite or phosphine. Thus, 200 g MeOH, 19.80 g H<sub>2</sub>O, 2.02 g CoCO<sub>3</sub>, 1.00 g NaI, 9.11 g Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub>, and 0.168 g PtCl<sub>4</sub> in a 1 L autoclave were pressured with 1:3 CO-H to 350 bar over 6 h at 185° to give a mixture containing 40.5, EtOH, 2.7 PrOH, and 44.1% MeOH.

L13 ANSWER 256 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalysts containing cobalt carbonyls and, for oxidation of alkenes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1981:497066 HCAPLUS  
DOCUMENT NUMBER: 95:97066  
ORIGINAL REFERENCE NO.: 95:16299a,16302a  
TITLE: Ketones  
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 56049333	A	19810502	JP 1979-126080	19790927 <--
JP 58035975	B	19830805		

PRIORITY APPLN. INFO.: JP 1979-126080 A 19790927 <--

AB Ketones were prepared by reaction of olefins with CO and H<sub>2</sub>O in the presence of organophosphorus and Co carbonyl compds. Thus, 400 mmol propylene and 70 kg/cm<sup>2</sup> CO were heated over 2 mmol Co<sub>2</sub>(CO)<sub>8</sub>, 2 mmol Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub> (I), and 30 mmol H<sub>2</sub>O in dioxane at 165°/100 kg/cm<sup>2</sup> for 17 h to give 87% mixture ketones of Pr<sub>2</sub>CO, (Me<sub>2</sub>CH)<sub>2</sub>CO, 2-methyl-3-hexanone, and 12% PrCHO and Me<sub>2</sub>CHCHO, vs. 28.8% ketones and 8.1% PrCHO without I.

L13 ANSWER 257 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for isomerization of epoxyalkanones and epoxycycloalkanones)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1981:442488 HCAPLUS  
DOCUMENT NUMBER: 95:42488  
ORIGINAL REFERENCE NO.: 95:7269a

TITLE: 1,3-Diones from 2,3-epoxy-1-ones  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56015216	A	19810214	JP 1979-88174	19790713 <--
JP 62048655	B	19871015		

PRIORITY APPLN. INFO.: JP 1979-88174 A 19790713 <--

AB 1,3-Alkanediones and -cycloalkanediones were prepared by isomerization of the appropriate  $\alpha,\beta$ -epoxy ketones in the presence of Pd compound and a (diphenylphosphinyl)alkane. Thus, 247 mg 5,6-epoxy-4-tridecanone in toluene containing Pd(PPh<sub>3</sub>)<sub>4</sub> and (Ph<sub>2</sub>PCH<sub>2</sub>)<sub>2</sub> was heated at 140° for 90 h to give 94.3% Me(CH<sub>2</sub>)<sub>6</sub>COCH<sub>2</sub>COPr.

L13 ANSWER 258 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
 (catalyst from palladium, phenoxide, and, for isomerization of hydroxydimethyloctenylamine)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1981:425331 HCAPLUS  
 DOCUMENT NUMBER: 95:25331  
 ORIGINAL REFERENCE NO.: 95:4427a,4430a  
 TITLE: Hydroxycitronellal  
 PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55162730	A	19801218	JP 1979-69615	19790604 <--
JP 58026893	B	19830606		
NL 8006614	A	19820701	NL 1980-6614	19801204 <--
NL 180308	B	19860901		
NL 180308	C	19870202		

PRIORITY APPLN. INFO.: JP 1979-69615 19790604 <--

AB 7-Hydroxycitronellal (I) was prepared by isomerization of cis- or trans-Me<sub>2</sub>C(OH)(CH<sub>2</sub>)<sub>3</sub>CMc:CHCH<sub>2</sub>NRR<sub>1</sub> II (R, R<sub>1</sub> = alkyl, cycloalkyl; RR<sub>1</sub>N may form a ring) in the presence of divalent Pd compds. phosphines, and alkali metal phenoxides followed by hydrolysis of the resulting Me<sub>2</sub>C(OH)(CH<sub>2</sub>)<sub>3</sub>CHMeCH:CHNRR<sub>1</sub> (III). Thus, a mixture of 100 g trans-II (R = R<sub>1</sub> = Et), 30 mg Pd(NO<sub>3</sub>)<sub>2</sub>, 59 mg Ph<sub>3</sub>P, and 66 mg PhONa in THf was heated 15 h at 150° to give 91 g III (R = R<sub>1</sub> = Et), which was made weakly acidic with 2 N H<sub>2</sub>SO<sub>4</sub> to give 59% I.

L13 ANSWER 259 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (ligand exchange reaction of, with tris(triphenylphosphine)rhodium  
 carbonyl hydride)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1981:156314 HCAPLUS  
 DOCUMENT NUMBER: 94:156314  
 ORIGINAL REFERENCE NO.: 94:25541a,25544a  
 TITLE: Carbonylation process using transition metal catalysts  
 INVENTOR(S): Huang, I-Der; Westner, Andrew A.; Oswald, Alexis A.;  
 Jermansen, Torris G.  
 PATENT ASSIGNEE(S): Exxon Research and Engineering Co., USA  
 SOURCE: PCT Int. Appl., 194 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
WO 8001690	A1	19800821	WO 1980-US213	19800212 <--
W: BR, DE, GB, JP, NL, SE				
RW: FR				
US 4298541	A	19811103	US 1979-11238	19790212 <--
US 4302401	A	19811124	US 1980-114627	19800123 <--
NL 8020079	A	19801231	NL 1980-20079	19800212 <--
NL 8020086	A	19801231	NL 1980-20086	19800212 <--
NL 8020087	A	19801231	NL 1980-20087	19800212 <--
NL 8020088	A	19801231	NL 1980-20088	19800212 <--
EP 23923	A1	19810218	EP 1980-900539	19800212 <--
EP 23923	B1	19850814		
R: FR				
EP 23924	A1	19810218	EP 1980-900541	19800212 <--
EP 23924	B1	19850508		
R: FR				
JP 56500167	T	19810219	JP 1980-500651	19800212 <--
EP 24088	A1	19810225	EP 1980-900484	19800212 <--
R: FR				
EP 24091	A1	19810225	EP 1980-900540	19800212 <--
EP 24091	B1	19850403		
R: FR				
DE 3034352	T0	19810326	DE 1980-3034352	19800212 <--
GB 2086906	A	19820519	GB 1980-31136	19800212 <--
GB 2086906	B	19830817		
EP 71281	A2	19830209	EP 1982-107978	19800212 <--
EP 71281	A3	19830601		
EP 71281	B1	19860618		
R: FR				
EP 159460	A1	19851030	EP 1985-100028	19800212 <--
R: FR				
SE 8007080	A	19801009	SE 1980-7080	19801009 <--
SE 439439	B	19850617		
SE 439439	C	19850926		
SE 8007079	A	19801029	SE 1980-7079	19801009 <--
SE 8007139	A	19801010	SE 1980-7139	19801010 <--

SE 449750	B	19870518		
SE 449750	C	19870827		
SE 8007140	A	19801010	SE 1980-7140	19801010 <--
SE 449093	B	19870406		
SE 449093	C	19870716		
BR 8006681	A	19801230	BR 1980-6681	19801013 <--
US 4390729	A	19830628	US 1980-204245	19801103 <--
SE 8200371	A	19820122	SE 1982-371	19820122 <--
SE 8204443	A	19820723	SE 1982-4443	19820723 <--

PRIORITY APPLN. INFO.:

		US 1979-11238	A	19790212 <--
		US 1979-43548	A	19790529 <--
		US 1980-114627	A	19800123 <--
		EP 1980-900540	A	19800212 <--
		EP 1982-107978	P	19800212 <--
		WO 1980-US213	W	19800212 <--

OTHER SOURCE(S): MARPAT 94:156314

AB Alkenes were hydroformylated over [(R2PZ)nEm(R1)m-n]p.(RhXq)s [R = C6-10 aryl; Z = alkylene, oxybisalkylene, phenylenebisalkylene; n = 1-4 (m-n ≥ 0); E = tetravalent C, P(O), SO2, CO, O2C, CO2, nitrilo, O, S, (un)substituted CONH, CONH2, or NHCO; m is the valence of E; R1 = aryl, alkyl, or ER1 form a heterocycle when E = nitrilo; n + p = 1-6; X = anion or organic ligand (halogens excluded); q = 2-6; s = 1-3]. Thus, 1-butene was hydroformylated over (Ph2PCH2CH2SiMe3)3.Rh(CO)H to give pentanal and 2-methylbutanal.

L13 ANSWER 260 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4D, rhodium complexes

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for hydroformylation of alkenes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1981:120864 HCAPLUS

DOCUMENT NUMBER: 94:120864

ORIGINAL REFERENCE NO.: 94:19751a,19754a

TITLE: Hydroformylation of olefins

INVENTOR(S): Bartish, Charles M.

PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA

SOURCE: U.S., 7 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4230641	A	19801028	US 1977-853343	19771121 <--
PRIORITY APPLN. INFO.:			US 1977-853343	A 19771121 <--
AB Hydroformylation of alkenes to aldehydes with high normal/branched isomer ratios is catalyzed by Rh complexed with R1R2PAPR3R4 (R1,R3 = C2-6 alkenyl, C1-6 alkyl, H, Ph; R2, R4 = Ph or substituted Ph; A = C2-10 alkylene). Data for several runs for hydroformylation of octene using Rh6(CO)16 complexed with several phosphine ligands are tabulated.				

L13 ANSWER 261 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(rhodium hydroformylation catalysts containing, for hexene)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1980:549796 HCAPLUS  
DOCUMENT NUMBER: 93:149796  
ORIGINAL REFERENCE NO.: 93:23863a,23866a  
TITLE: Hydroformylation catalyst  
INVENTOR(S): Hughes, O. Richard  
PATENT ASSIGNEE(S): Celanese Corp., USA  
SOURCE: U.S., 9 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4201728	A	19800506	US 1977-825896	19770819 <--
US 4201714	A	19800506	US 1978-917245	19780620 <--

PRIORITY APPLN. INFO.: US 1977-825896 A3 19770819 <--  
AB Hydroformylation of 1-hexene is catalyzed by (PPh<sub>3</sub>)<sub>3</sub>Rh(CO)H in the presence of a bidentate and a monodentate ligand. Bidentate ligands used were trans-1,2-bis(diphenylphosphinomethyl)cyclobutane, 1,1'-bis(diphenylphosphino)ferrocene, and DIOP. Monodentate ligands used were PMe<sub>2</sub>Ph, tris(octylphosphine), cyclohexyldiphenylphosphine, etc. The best selectivity and efficiency was obtained with a molar ratio of PPh<sub>3</sub> to Rh metal of 227:1.

L13 ANSWER 262 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalyst containing cobalt(acetylacetonate) and, for isomerization of piperitol to isomenthone)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1980:426589 HCAPLUS  
DOCUMENT NUMBER: 93:26589  
ORIGINAL REFERENCE NO.: 93:4469a,4472a  
TITLE: Isomenthone  
INVENTOR(S): Kumobayashi, Hidenori; Taketomi, Hironao; Akutagawa, Susumu  
PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 55002627                    A            19800110            JP 1978-74765                    19780620 <--  
 JP 58011935                    B            19830305  
 PRIORITY APPLN. INFO.:                    JP 1978-74765                    A    19780620 <--  
 AB    Isomenthone (I) was prepared by treating piperitol (II) with low valence Co complexes coordinated with phosphines. Thus, 1.2 mmol Et3Al was added to a mixture of 0.4 mmol Co acetylacetonate and 0.8 mmol 1,1'-bis(diphenylphosphino)ferrocene in THF with dry ice-Me2CO cooling, 10 g 1-cis-II (containing 16.2% d-trans-II) added at room temperature, and the whole kept 8 h at 60° to give 8 g d-I containing 10% d-menthone. dl-I was also prepared

L13    ANSWER 263 OF 279    HCAPLUS    COPYRIGHT 2008 ACS on STN  
 IT    6737-42-4  
       RL: RCT (Reactant); RACT (Reactant or reagent)  
           (catalyst containing cobalt(acetylacetonate) and, for isomerization of piperitol)  
 RN    6737-42-4    HCAPLUS  
 CN    Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl-    (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER:            1980:426588    HCAPLUS  
 DOCUMENT NUMBER:            93:26588  
 ORIGINAL REFERENCE NO.:    93:4469a,4472a  
 TITLE:                        Isomerization of piperitol  
 INVENTOR(S):                 Kumobayashi, Hidenori; Taketomi, Hironao; Akutagawa, Susumu  
 PATENT ASSIGNEE(S):         Takasago Perfumery Co., Ltd., Japan  
 SOURCE:                        Jpn. Kokai Tokkyo Koho, 10 pp.  
                                   CODEN: JKXXAF  
 DOCUMENT TYPE:                Patent  
 LANGUAGE:                     Japanese  
 FAMILY ACC. NUM. COUNT:    1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 55002628	A	19800110	JP 1978-74766	19780620 <--
JP 57035885	B	19820731		

PRIORITY APPLN. INFO.:                    JP 1978-74766                    A    19780620 <--  
 AB    cis-Piperitol (I) and trans-piperitol (II) were isomerized by treatment for a short time with low atomic valency Co complexes coordinated with phosphines. Thus, 1.2 mmol Et3Al was added to a mixture of 0.4 mmol Co acetylacetonate and 0.8 mmol 1,1'-bis(diphenylphosphino)ferrocene in THF with dry ice-Me2CO cooling, 10 g 1-I (containing 16.2% d-II) added at room temperature, and the whole stirred 1 h at 60° to give a mixture (d-isomenthone 5.2, 1-I 28, and d-II 65%), which was distilled to give 3.1 g 1-I and 6.3 g d-II.

L13    ANSWER 264 OF 279    HCAPLUS    COPYRIGHT 2008 ACS on STN  
 IT    6737-42-4  
       RL: CAT (Catalyst use); USES (Uses)  
           (catalysts containing, for carbonylation and dimerization of butadiene)  
 RN    6737-42-4    HCAPLUS  
 CN    Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl-    (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1980:180679 HCAPLUS  
 DOCUMENT NUMBER: 92:180679  
 ORIGINAL REFERENCE NO.: 92:29253a,29256a  
 TITLE: A process for preparing unsaturated aliphatic esters from aliphatic dienes  
 INVENTOR(S): Knifton, John Frederick  
 PATENT ASSIGNEE(S): Texaco Development Corp., USA  
 SOURCE: Brit. UK Pat. Appl., 9 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2014136	A	19790822	GB 1979-3080	19790129 <--
GB 2014136	B	19820902		
US 4172087	A	19791023	US 1978-877439	19780213 <--
JP 54115316	A	19790907	JP 1979-12845	19790208 <--
BE 874103	A1	19790813	BE 1979-193409	19790212 <--
FR 2416881	A1	19790907	FR 1979-3464	19790212 <--
FR 2416881	B1	19831125		
DE 2905209	A1	19791025	DE 1979-2905209	19790212 <--

PRIORITY APPLN. INFO.: US 1978-877439 A 19780213 <--

AB Monomeric and dimeric unsatd. carboxylic acids or their esters were concurrently prepared from a C4-8 aliphatic conjugated diene by heating the diene, a hydroxyl compound (H2O or C1-12 alkanol) and a heterocyclic amine under CO pressure at 30-150°. Thus, degassed quinoline and Me2CHOH were added to an autoclave, and Ph2P(CH2)2PPh2 [1663-45-2]/Pd(OAc)2 [3375-31-3] added under N. The reactor was then sealed, deoxygenated with N, and 1,3-butadiene [106-99-0] injected in. The reactor was pressurized to 700 psig with CO and the mixture heated, with agitation, at 110° for 18 h. Iso-Pr 3-pentenoate [62030-41-5] and iso-Pr 3,8-nonadienoate [38342-40-4] were the primary fractions in pentenoate and nonadienoate obtained in 26 and 13.5 mol % yield, resp. Pd recovery was >90%. The products are useful as lubricants or lubricant additives.

L13 ANSWER 265 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (promoters, for platinum complex catalysts for hydroformylation of alkenes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

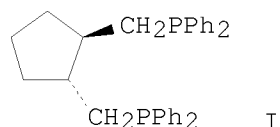
Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1980:6067 HCAPLUS  
 DOCUMENT NUMBER: 92:6067  
 ORIGINAL REFERENCE NO.: 92:1139a,1142a  
 TITLE: Aldehydes by hydroformylation of olefins  
 INVENTOR(S): Ogata, Ikuei; Kawabata, Yasuziro; Tanaka, Masato; Hayashi, Teruyuki  
 PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan  
 SOURCE: Ger. Offen., 36 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2909041	A1	19791004	DE 1979-2909041	19790308 <--
JP 54119407	A	19790917	JP 1978-26824	19780309 <--
JP 57061335	B	19821223		
FR 2419268	A1	19791005	FR 1979-6154	19790309 <--
FR 2419268	B1	19840224		
US 4229381	A	19801021	US 1979-18879	19790309 <--
US 4370258	A	19830125	US 1981-261488	19810507 <--
PRIORITY APPLN. INFO.:			JP 1978-26824	A 19780309 <--
			US 1979-18879	A3 19790309 <--
			US 1980-134100	A3 19800326 <--

OTHER SOURCE(S): MARPAT 92:6067  
GI



AB Aldehydes were prepared by hydroformylation of alkenes with H and CO in the presence of a Pt complex catalyst and an auxiliary catalyst consisting of at least one Group IVB halide and, as promoter, a bidentate ligand R2XYZZXR21 (R = or  $\neq$  R1 = alkyl, aryl, or aralkyl; X = P, As, or Sb; Y = alkylene, arylene, or aralkylene; Z = O or CH2). Data for 26 runs with propene, 1-butene, or 1-pentene and 11 comparison examples with conventional Rh catalysts were given and showed extremely high selectivity for linear isomers. Catalysts used included, e.g., Pt(PhCN)2Cl2 and SnCl2; promoters included Ph2P(CH2)4PPh2 and I.

L13 ANSWER 266 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for hydroformylation of aryl alc.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1979:574826 HCAPLUS  
DOCUMENT NUMBER: 91:174826  
ORIGINAL REFERENCE NO.: 91:28191a,28194a  
TITLE: Aldehydes  
INVENTOR(S): Matsumoto, Mitsuo; Tamura, Masuhiko  
PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan  
SOURCE: Ger. Offen., 32 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 2904782	A1	19790816	DE 1979-2904782	19790208 <--
DE 2904782	C2	19831027		
JP 54106407	A	19790821	JP 1978-14410	19780209 <--
JP 56005372	B	19810204		
JP 54138511	A	19791027	JP 1978-44611	19780414 <--
JP 57025013	B	19820527		
US 4215077	A	19800729	US 1979-7660	19790129 <--
GB 2014138	A	19790822	GB 1979-3651	19790202 <--
GB 2014138	B	19820707		

PRIORITY APPLN. INFO.: JP 1978-14410 A 19780209 <--  
JP 1978-44611 A 19780414 <--

AB Alkenes (e.g., C<sub>2</sub>H<sub>4</sub>, C<sub>3</sub>H<sub>6</sub>, 1-butene) and olefinic compds. (e.g., allyl alc.) were hydroformylated to aldehydes in the presence of a catalyst containing a Rh complex [especially HRh(CO)PPh<sub>3</sub>], a monophosphine (e.g., Ph<sub>3</sub>P), and a diphosphine (e.g., Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>). Data for 14 runs and 7 prior art runs were given.

L13 ANSWER 267 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
(rhodium catalysts containing, for carbonylation of methanol)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1979:54480 HCAPLUS  
DOCUMENT NUMBER: 90:54480  
ORIGINAL REFERENCE NO.: 90:8705a,8708a  
TITLE: Carboxylic acids and esters  
INVENTOR(S): Bartish, Charles M.  
PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA  
SOURCE: U.S., 6 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent  
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4102920	A	19780725	US 1977-759082	19770113 <--
CA 1100525	A1	19810505	CA 1977-293411	19771219 <--
GB 1584740	A	19810218	GB 1977-54348	19771230 <--
NL 7800264	A	19780717	NL 1978-264	19780109 <--
DE 2800986	A1	19780720	DE 1978-2800986	19780111 <--
BE 862828	A2	19780502	BE 1978-56592	19780112 <--
JP 53090204	A	19780808	JP 1978-2318	19780112 <--
FR 2392948	A1	19781229	FR 1978-779	19780112 <--

PRIORITY APPLN. INFO.: US 1977-759082 A 19770113 <--

AB MeOH was carbonylated with CO in the presence of Rh complexes containing polydentate chelating P or As ligands, e.g. (Ph<sub>2</sub>P)<sub>2</sub>CH<sub>2</sub>, Ph<sub>2</sub>AsCH<sub>2</sub>CH<sub>2</sub>AsPh<sub>2</sub>. Thus, treating MeOH with CO at 190° in the presence of di[1,2-bis(diphenylphosphino)ethane]rhodium chloride gave 95% HOAc.

L13 ANSWER 268 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts from palladium and, for amination of butadiene with ammonia)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1979:54459 HCAPLUS  
DOCUMENT NUMBER: 90:54459  
ORIGINAL REFERENCE NO.: 90:8705a,8708a  
TITLE: Primary and secondary amines by reaction of ammonia with conjugated diene in the presence of palladium/phosphine catalyst and primary or secondary aliphatic alcohol solvent medium  
INVENTOR(S): Hobbs, Charles F.; McMackins, Dudley E.  
PATENT ASSIGNEE(S): Monsanto Co., USA  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4120901	A	19781017	US 1977-829558	19770831 <--

PRIORITY APPLN. INFO.: US 1977-829558 A 19770831 <--  
AB Ethylenic primary and secondary amines were prepared by the reaction in 1 or more primary and/or secondary aliphatic alcs., of NH<sub>3</sub> with C<sub>4</sub>-8 alkadienes in the presence of a catalyst comprised of a Pd compound and a phosphine ligand containing 2-4 P atoms. Thus, 54.4 g NH<sub>3</sub> and 28.7 g 1,3-butadiene (I) were charged to an autoclave containing 1.67 g (AcO)<sub>2</sub>Pd and 4.13 g (Ph<sub>2</sub>PCH<sub>2</sub>)<sub>2</sub> in 33 mL EtOH and heated 1 h at 145° under autogenous pressure to give 90% conversion of I with 49% selectivity to a mixture of CH<sub>2</sub>:CHCHMeNH<sub>2</sub> and cis- and trans-MeCH:CHCH<sub>2</sub>NH<sub>2</sub> and 27% to a mixture of trans,trans-(MeCH:CHCH<sub>2</sub>)<sub>2</sub>NH and trans-MeCH:CHCH<sub>2</sub>NHCHMeCH:CH<sub>2</sub>.

L13 ANSWER 269 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4D, iridium complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for carbonylation of methanol)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1979:5926 HCAPLUS  
DOCUMENT NUMBER: 90:5926  
ORIGINAL REFERENCE NO.: 90:1084h,1085a  
TITLE: Carboxylic acids and esters  
INVENTOR(S): Bartish, Charles M.  
PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4102921	A	19780725	US 1977-791121	19770426 <--
PRIORITY APPLN. INFO.:			US 1977-791121	A 19770426 <--

AB Carbonylation of alcs. is achieved in the presence of an IR catalyst containing a polydentate chelating P ligand. Thus, carbonylation of MeOH in the presence of di[1,2-bis(diphenylphosphino)ethane]carbonyliridium(I) chloride with 750 psig CO gave HOAc. Maximum rates are achieved with a P-Ir ratio of 1-2:1. Other phosphorus ligands used were bis(diphenylphosphino)methane, bis(diphenylphosphino)propane, and bis(diphenylphosphino)butane.

L13 ANSWER 270 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4D, rhodium complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for carbonylation of methanol to acetic acid)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1978:563081 HCAPLUS  
DOCUMENT NUMBER: 89:163081  
ORIGINAL REFERENCE NO.: 89:25261a,25264a  
TITLE: Carboxylic acids and esters  
INVENTOR(S): Bartish, Charles Michael  
PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA  
SOURCE: Ger. Offen., 23 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2800986	A1	19780720	DE 1978-2800986	19780111 <--
US 4102920	A	19780725	US 1977-759082	19770113 <--
PRIORITY APPLN. INFO.:			US 1977-759082	A 19770113 <--

AB ROH (R = C1-20 alkyl), RX (R = C1-20 alkyl, X = halo) and ROR or RCO<sub>2</sub>R (R = C1-19 alkyl) were carbonylated with CO in the presence of Rh complexes. Among the approx. 30 catalysts used for the carbonylation of MeOH to AcOH were Rh complexes with Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (n = 2-4), cis-Ph<sub>2</sub>PCH:CHPPh<sub>2</sub>, Ph<sub>2</sub>As(CH<sub>2</sub>)<sub>n</sub>AsPh<sub>2</sub> (n = 1, 2), and Ph<sub>2</sub>AsCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>.

L13 ANSWER 271 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, containing dicobalt octacarbonyl, for hydrogenation of acetals to cellosolves)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1977:517575 HCAPLUS  
DOCUMENT NUMBER: 87:117575  
ORIGINAL REFERENCE NO.: 87:18657a,18660a

TITLE: Glycol monoether  
 INVENTOR(S): Onoda, Takeru; Tomita, Shimpei  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan  
 SOURCE: Ger. Offen., 17 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2655406	A1	19770616	DE 1976-2655406	19761207 <--
DE 2655406	C2	19840719		
JP 52071408	A	19770614	JP 1975-148002	19751212 <--
JP 60044288	B	19851002		
JP 52073809	A	19770621	JP 1975-150386	19751217 <--
JP 60044289	B	19851002		
PRIORITY APPLN. INFO.:			JP 1975-148002	A 19751212 <--
			JP 1975-150386	A 19751217 <--

AB Yields of Cellosolves ROCH<sub>2</sub>OH (R=Bu, Me<sub>2</sub>CHCH<sub>2</sub>, Pr) were increased by hydrogenation of (RO)<sub>2</sub>CH<sub>2</sub> over Co<sub>2</sub>(CO)<sub>8</sub> (I) mixts. with P compds., e.g., (n-C<sub>8</sub>H<sub>17</sub>)<sub>3</sub>P, or with Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>. Thus, 60.3% BuOCH<sub>2</sub>OH was obtained with I alone; 65.1-74.4% was obtained using I with various P compds.

L13 ANSWER 272 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (catalysts containing palladium salts and, for addition of dicarbonyl compds. with conjugated dienes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1975:155389 HCAPLUS  
 DOCUMENT NUMBER: 82:155389  
 ORIGINAL REFERENCE NO.: 82:24785a,24788a  
 TITLE: β-Alkenyl-α,γ-dicarbonyl compounds  
 INVENTOR(S): Takahashi, Kuniyuki; Hata, Takeshi; Miyake, Akihisa  
 PATENT ASSIGNEE(S): Toray Industries, Inc.  
 SOURCE: Jpn. Tokkyo Koho, 7 pp.  
 CODEN: JAXXAD  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49028172	B	19740724	JP 1969-85472	19691027 <--
PRIORITY APPLN. INFO.:			JP 1969-85472	19691027 <--

AB β-Alkenyl-α,γ-dicarbonyl compds. were prepared by reaction of α,γ-dicarbonyl compds. with at least 1 hydrogen at β-carbon atom with a conjugated diene in the presence of: (1) Pd compds. selected from divalent Pd nitrate, cyanate, thiocyanate, carboxylate, N-coordinated complex and organic ligand complex and (2) diphosphine compds. bonded by C1-4 carbon chain or similar diarsine compds. without the use of alkali metal or basic alkali metal compds.

Thus, a mixture of AcCH<sub>2</sub>CO<sub>2</sub>Et 13.0, (Pd(OAc)<sub>2</sub> 0.045, and Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>PPh<sub>2</sub> 0.199 g was heated with CH<sub>2</sub>:CHCH:CH<sub>2</sub> 18 hr at 130-50° to give Et 2-acetyl-3-methyl-4-pentenoate 6.4, Et 2-acetyl-4-hexenoate 7.4, and Et 2-acetyl-2-(butenyl)-4-hexenoate 4.3 g.

L13 ANSWER 273 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing nickel chloride and triethylaluminum, for addition of butadiene to ethylene)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1974:3057 HCAPLUS  
DOCUMENT NUMBER: 80:3057  
ORIGINAL REFERENCE NO.: 80:535a,538a  
TITLE: 1,4,9-Decatriene  
INVENTOR(S): Hashimoto, Horukichi; Inoue, Yoshio  
SOURCE: Jpn. Tokkyo Koho, 3 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48030244	B	19730918	JP 1969-39129	19690522 <--
PRIORITY APPLN. INFO.:			JP 1969-39129	19690522 <--

AB 1,4,9-Decatriene (I) was prepared by reacting ethylene (II) and butadiene (III) under an inert atmospheric in catalytic presence of NiCl<sub>2</sub>, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (IV) [or Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>m</sub>O(CH<sub>2</sub>)<sub>m</sub>PPh<sub>2</sub> (V)] (n = 1-6, m = 1-3), and R<sub>3</sub>Al (R = lower alkyl). Thus, a mixture of 5 ml PhMe 0.31 g NiCl<sub>2</sub>-bis(diphenylphosphino)ethane (IV, n = 2) complex (VI) 43 g II, 1.14 g Et<sub>3</sub>Al, and 20 atm III was stirred 3 hr at 110° to give 26 g I (selectivity for I, 75%). IV (n = 1, 3, and 4) and V (m = 2) were also used in place of VI.

L13 ANSWER 274 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, nickel complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for rearrangement of methylbutene nitrile)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1971:463170 HCAPLUS  
DOCUMENT NUMBER: 75:63170  
ORIGINAL REFERENCE NO.: 75:10007a,10010a  
TITLE: 3-Pentenitrile from 2-methyl 3-butenenitrile  
INVENTOR(S): Pasquino, Pietro; Benzoni, Luigi; Carnisio, Giuseppe; Colombo, Luigi  
PATENT ASSIGNEE(S): Montecatini Edison S.p.A.  
SOURCE: Ger. Offen., 8 pp.  
CODEN: GWXXBX

DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2061660	A	19710624	DE 1970-2061660	19701215 <--
NL 7017965	A	19710621	NL 1970-17965	19701209 <--
GB 1285808	A	19720816	GB 1970-1285808	19701210 <--
FR 2073605	A5	19711001	FR 1970-44682	19701211 <--
US 3697578	A	19721010	US 1970-98908	19701216 <--
ES 386504	A1	19730316	ES 1970-386504	19701216 <--
JP 50001248	B	19750116	JP 1970-112561	19701217 <--
PRIORITY APPLN. INFO.:			IT 1969-25901	A 19691217 <--

AB The title compound (I), useful as an intermediate for amines, dinitriles, and acids, was prepared in 39.7-79.5% yield by isomerization of CH<sub>2</sub>:CHCHMeCN (II) 15-150 min at 50-150° in the presence of [Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub>]<sub>2</sub>Ni (III) (n = 3-5) in 1:100-1000 molar ratio. Thus, a mixture containing 10 g II and 0.25 g III (n = 4) was refluxed 1 hr at 128-39° to give a mixture of I 75.21, cis-MeCH:CMcCN 11.02, and trans-MeCH:CMcCN 7.08%.

L13 ANSWER 275 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, nickel complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for reaction of butadiene with hydrocyanic acid)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1971:124890 HCAPLUS  
DOCUMENT NUMBER: 74:124890  
ORIGINAL REFERENCE NO.: 74:20179a,20182a  
TITLE: Pentenenitriles  
INVENTOR(S): Albanese, Pietro; Benzoni, Luigi; Corain, Benedetto;  
Turco, Aldo  
PATENT ASSIGNEE(S): Montecatini Edison S.p.A.  
SOURCE: Ger. Offen., 9 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2009470	A	19710311	DE 1970-2009470	19700228 <--
NL 7002580	A	19700907	NL 1970-2580	19700224 <--
GB 1281465	A	19720712	GB 1970-1281465	19700225 <--
FR 2033107	A5	19701127	FR 1970-6993	19700226 <--
US 3686264	A	19720822	US 1970-15253	19700227 <--
BE 746736	A	19700902	BE 1970-746736	19700302 <--
ES 377044	A1	19730201	ES 1970-377044	19700302 <--
PRIORITY APPLN. INFO.:			IT 1969-13592	A 19690303 <--

AB The title compds. were prepared by reaction of HCN with butadiene in C<sub>6</sub>H<sub>6</sub> at 100° in the presence of Ni[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub>]<sub>2</sub> (I) (n = 2, 3, or 4) as catalyst. Thus, heating a mixture containing C<sub>6</sub>H<sub>6</sub> 32.5, I (n = 4) 0.73, HCN 1.15, and butadiene 3.2 g 6 hr at 100° in an autoclave under argon

gave 92% (with respect to converted HCN) MeCH:CHCH<sub>2</sub>CN and an isomer mixture containing 25% MeCH:CM<sub>2</sub>CN and 75% H<sub>2</sub>C:-CHCHMeCN.

L13 ANSWER 276 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, palladium complexes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1970:434822 HCAPLUS  
DOCUMENT NUMBER: 73:34822  
ORIGINAL REFERENCE NO.: 73:5773a, 5776a  
TITLE: β-Alkenyl-α,γ-dicarbonyl compounds  
INVENTOR(S): Takahashi, Kuniyuki; Hata, Go; Miyake, Akihisa  
PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.  
SOURCE: Ger. Offen., 70 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 1955664	A	19700506	DE 1969-1955664	19691105 <--
DE 1955664	B2	19761202		
DE 1955664	C3	19770818		
NL 6916698	A	19700508	NL 1969-16698	19691105 <--
FR 2022644	A5	19700731	FR 1969-38088	19691105 <--
GB 1293549	A	19721018	GB 1969-1293549	19691105 <--
CH 533590	A	19730330	CH 1969-16492	19691105 <--
PRIORITY APPLN. INFO.:			JP 1968-80336	A 19681105 <--

AB Title compds. were prepared by the reaction of a conjugated diene with an α,γ-dicarbonyl compound in the presence of a Pd complex. The compds. may be useful as intermediates in the synthesis of perfumes and other products. Thus, 0.22 g Pd[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>PPh<sub>2</sub>]<sub>2</sub> (I) and 13 g AcCH<sub>2</sub>CO<sub>2</sub>Et (II) placed in a 100 ml autoclave and the atmospheric expelled with gaseous CH<sub>2</sub>:CHCH:CH<sub>2</sub> (III), 13 ml liquid III added, and the mixture heated 2 hr at 143-50° gave 2.1 g CH<sub>2</sub>:CHCHMeCHAcCO<sub>2</sub>Et (IV), b. 215°, n<sub>25D</sub> 1.4372, and 2.7 g MeCH:CHCH<sub>2</sub>CHAcCO<sub>2</sub>Et (V), b. 220°, n<sub>25D</sub> 1.4422. IV (11.8 g) and 14.7 g V were obtained by using 0.24 g PhOH and 26 g II in the above reaction. In all, 150 examples were given: aliphatic and cycloaliphatic compds. were prepared

L13 ANSWER 277 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, iron complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts from chlorodiethylaluminum and, for addition reaction of butadiene with ethylene)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1969:501275 HCAPLUS  
 DOCUMENT NUMBER: 71:101275  
 ORIGINAL REFERENCE NO.: 71:18841a,18844a  
 TITLE: Preparation of 1,4-dienes  
 PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.  
 SOURCE: Fr., 9 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1548453		19681206	FR	19670919 <--
DE 1668727			DE	
GB 1183396			GB	
JP 44032768		19690000	JP	<--
US 3475509		19691028	US	19670915 <--
PRIORITY APPLN. INFO.:			JP	19660919 <--
			JP	19661003 <--

AB Conjugated dienes are reacted with ethylene in the presence of a specific catalyst to obtain a mixture of the title compds. with some 1,5-dienes. The catalyst is prepared by reacting 11.9 g. powdered  $\text{Ph}_2\text{P}(\text{CH}_2)_2\text{P}(\text{Ph})_2$ , 5.3 g. ferric acetylacetonate in 250 ml. dried and deaerated ether. To this, 15 ml.  $\text{EtOAlEt}_2$  in 100 ml. ether is added dropwise while stirring. The addition took 2.5 hrs. Stirring is maintained at  $0^\circ$  30 min. and at room temperature for an hr. to give 11.2 g.  $\text{Fe}[\text{Ph}_2\text{PCH}_2\text{CH}_2\text{P}-\text{Ph}]_2\cdot\text{CH}_2:\text{CH}_2$ , m.  $170^\circ$ . The diene is then prepared by mixing 26 ml. butadiene and 0.44 g. of the catalyst in 10 ml. toluene. Then, 8 ml.  $\text{Et}_2\text{AlCl}$  in toluene is also added at  $0^\circ$ . An 8 mole ratio of  $\text{Et}_2\text{AlCl}$  to Fe catalyst is used. The whole mixture is heated 30 min. at  $50^\circ$  at a 40 kg.  $\text{cm}^{-2}$  ethylene pressure. There is obtained 21.2 g. 1,4-hexadiene and 0.7 g. residue. The catalyst was also prepared with propylene, 1-pentene and styrene. The best results are obtained with the 1-pentene catalyst which gave with a 99.33% yield a mixture containing 97.65% 1,4-diene.

L13 ANSWER 278 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, cobalt complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for addition reaction of conjugated diolefins with  $\alpha$ -olefins)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

ACCESSION NUMBER: 1968:59077 HCAPLUS  
 DOCUMENT NUMBER: 68:59077  
 ORIGINAL REFERENCE NO.: 68:11399a,11402a  
 TITLE: Hexadienes  
 PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.  
 SOURCE: Fr., 9 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 1487354	19670707	FR 1966-58584	19660422 <--
DE 1593574		DE	
GB 1131640		GB	
US 3548022	19701215	US	19660418 <--
PRIORITY APPLN. INFO.:		JP	19650422 <--
		JP	19651119 <--

AB Hexadienes are prepared in high yield by the reaction of  $\alpha$ -olefins with conjugated diolefinic hydrocarbons in the presence of a catalyst comprising a cobalt hydridetertiary diphosphine complex and an organoaluminum compound, organic alc., or Friedel-Crafts catalyst. Thus, 110 cc. butadiene obtained by liquefaction and 1 cc. Et<sub>3</sub>Al were added to 20 cc. PhMe containing 0.5 millimole CoH(Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub> (I), the autoclave sealed, 35 kg./cm.<sup>2</sup> ethylene injected during 3 hrs. at 80-90°, and the distillate analyzed by gas-phase chromatog. to confirm the formation of 1,4-hexadiene 51.2, 2,4-hexadiene 0.6, butadiene dimer 2.7, and high-boiling products 3.6 g. Similarly used as catalysts were the HClO<sub>4</sub> addition salt of I, I formed in situ by the reaction of CoCl<sub>2</sub>(Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub> with LiAlH<sub>4</sub> or NaBH<sub>4</sub>, or CoH(Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub> and Et<sub>2</sub>AlCl, EtOH, PhOH, p-chlorophenol, o-chlorophenol, p-cresol, 3,5-dimethylphenol, 2,4,5-trichlorophenol, Et<sub>3</sub>Al<sub>2</sub>Cl<sub>3</sub>, iso-Bu<sub>3</sub>Al, EtAlCl<sub>2</sub>, Et<sub>3</sub>Al-AlCl<sub>3</sub>, SnCl<sub>4</sub>, ZrCl<sub>4</sub>, WCl<sub>6</sub>, or BF<sub>3</sub>.Et<sub>2</sub>O. Solvents used in place of PhMe were PhCl, cyclohexane, EtOAc, tetrahydrofuran, and Et<sub>2</sub>O. Other monomers were prepared from other combinations of reactants, i.e. 2-methyl-1,4-hexadiene from butadiene and propylene and 4-methyl-1,4-hexadiene from isoprene and ethylene.

L13 ANSWER 279 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, Phosphine, trimethylenebis[diphenyl-  
(catalyst for dimerization of acrylonitrile)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1966:103655 HCAPLUS  
DOCUMENT NUMBER: 64:103655  
ORIGINAL REFERENCE NO.: 64:19427e-h  
TITLE: Dimerization of acrylonitrile  
INVENTOR(S): McClure, James D.  
PATENT ASSIGNEE(S): Shell Oil Co.  
SOURCE: 4 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3225083		19651221	US	19630815 <--
GB 1036519			GB	
PRIORITY APPLN. INFO.:			US	19630815 <--

AB Acrylonitrile dimerized at 100-200° in the presence of 0.001-0.1 mole aromatic tertiary phosphine catalyst/mole acrylonitrile and a hydroxylic solvent gives a mixture containing up to 30% 1,4-dicyano-1-butene

(I) in addition to the major product 2-methyleneglutaronitrile (II). Thus, acrylonitrile 40, hydroquinine 0.1, tri(p-tolyl)phosphine 1, and tert-BuOH 100 g. was heated at 161° in a glass-lined reactor for 8 hrs. After solvent stripping and neutralization with 0.3 g. AcOH, the mixture was

distilled to give 4.4 g. dimer, b0.1 60-100°, which contained II 67, trans-I 24, and cis-I 9%. The following dimers obtained were tabulated. catalyst, solvent, % yield of dimers, dimer composition, % II, % I, % cis-I, % trans-I; tri-p-tolylphosphine, triethylsilicol, 85, 69, , 15, 16; triphenylphosphine, tert-BuOH (III), 40, 59, , 11, 30; diphenyloctylphosphine, III, 60, 99, 1, , ; tris(p-dimethylaminophenyl) phosphine, III, 76, 99.5, 0.5, , ; , tributylphosphine, III, 72, 98, 2, , ; 1,2-bis(diphenylphosphino)ethane, III, 70, 81, , 3, 16; 1,3-bis(diphenylphosphino)propane, III, 69, 81, , 5, 14; bis(diphenylphosphino)methane, III, 76, 99, 1, , ; 1,4-bis(diphenylphosphino)butane, III, 58, 98.5, 1.5; 1,2-bis(dimethylphosphino)ethane, III, 60, 96.5, 3.5, , ; triphenylphosphine, triethylsilicol, 75, 60, , 13, 27, , ; 1,4-bis(diphenylphosphino)benzene, triethylsilicol, 75, 58, , 19, 23;

=> d 113 200-250 hitstr ibib abs

L13 ANSWER 200 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(catalyst containing rhodium complex and, for hydrogenation of (acylamino)alkenoates)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:232069 HCAPLUS

DOCUMENT NUMBER: 110:232069

ORIGINAL REFERENCE NO.: 110:38499a,38502a

TITLE: Stereoselective hydrogenation of (acylamino)alkenoates using rhodium-diphosphine complexes as catalysts

INVENTOR(S): Reiss, Jiri; Hetflejš, Jiri

PATENT ASSIGNEE(S): Czech.

SOURCE: Czech., 11 pp.

CODEN: CZXXA9

DOCUMENT TYPE: Patent

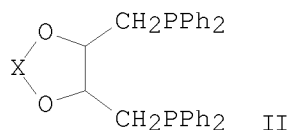
LANGUAGE: Czech

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CS 240663	B1	19860213	CS 1982-1919	19820319 <--
PRIORITY APPLN. INFO.:			CS 1982-1919	19820319 <--
OTHER SOURCE(S):	CASREACT	110:232069		

GI



AB R1R2CHCH(COR3)NR4COR5 [R1 = H, C1-5 alkyl, Ph, 3,4-Me2C6H3, 4,3-Me(AcO)C6H3, 4-AcOC6H4, 4-HOC6H4, 3,4-(methylenedioxo)phenyl; R2 = H, Me, R3CO; R3 = OH, C1-5 alkoxy, PhO, NH2; R4 = H, Me; R5 = Me, Ph, PhCH2, MeO] were prepared by hydrogenation of R1R2C:C(COR3)NR4COR5 at 10-80° and 30-2000 kPa H pressure in the presence of chiral complex catalysts Rh(olefin)mLp(O3SR) [I; olefin = C2-8 alkene, C5-8 cycloalkene, C4-12 cycloalkadiene, norbornadiene; R = Me, Et, naphthyl, (un)substituted Ph; m = 0, 1; p = 0.5-2; L = Ph2PCHR6(CHR7)nPPh2; II; R6 = H, Me, Ph; R7 = H, Me; X = Me2C, cycloalkylidene; n = 1-4]. Thus, (Z)-PhCH:C(NHAc)CO2H was hydrogenated at 91 kPa and 25° in C6H6/EtOH containing I [olefin = 1,5-cyclooctadiene, L = (-)-II, R = 4-MeC6H4, X = Me2C, m = p = 1] to give 90% (R)-(-)-N-acetylphenylalanine.

L13 ANSWER 201 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts from palladium compds., copper compds. and, for nitrobenzenes reaction with diethylamine and carbon monoxide)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1989:212337 HCAPLUS

DOCUMENT NUMBER: 110:212337

ORIGINAL REFERENCE NO.: 110:35223a,35226a

TITLE: Process for the coproduction of anilines and oxamides

INVENTOR(S): Drent, Eit

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 293999	A2	19881207	EP 1988-201105	19880601 <--
EP 293999	A3	19891115		
EP 293999	B1	19920520		
R: BE, DE, FR, GB, IT, NL				
CA 1336838	C	19950829	CA 1988-566119	19880506 <--
AU 8816789	A	19881208	AU 1988-16789	19880531 <--
AU 606161	B2	19910131		
JP 64003155	A	19890106	JP 1988-131790	19880531 <--
PRIORITY APPLN. INFO.:			GB 1987-12879	A 19870602 <--

OTHER SOURCE(S): MARPAT 110:212337

AB XnC6H5-nNH2 (X = halo, alkyl, CF3, alkoxy, aryloxy, cyano, esterified CO2H; n = 0-5) and R2NCOCONR2 (R = alkyl), useful as synthetic intermediates, are coproduced by reaction of XnC6H5-nNO2 (I), CO, and R2NH (a molar excess based on I) in the presence of Pd or its compds., an acid or its transition metal salt, and a bidentate ligand R1R2MAMR3R4 (M = P, As, Sb; A = C≥2 divalent organic residue; R1-R4 = hydrocarbyl). A mixture of PhNO2 and Et2NH in diglyme was autoclaved in the presence of Pd(OAc)2, CH2(CH2PPh2)2 (II), and Cu(OAc)2 at 60 bar CO pressure and 80° to give 67% Et2NCOCONEt2 and 32% Et2NCOCONHPh, vs. 10% and 3%, resp., with Ph3P instead of II.

L13 ANSWER 202 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst containing, for hydrocarbonylation of ethylene, acrylic acid or acrylate)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:175499 HCAPLUS  
DOCUMENT NUMBER: 110:175499  
ORIGINAL REFERENCE NO.: 110:29103a,29106a  
TITLE: Process for the hydrocarbonylation of ethylene, acrylic acid and/or an acrylate ester  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Brit. UK Pat. Appl., 15 pp.  
CODEN: BAXXDU  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 2202165	A	19880921	GB 1987-4958	19870303 <--
PRIORITY APPLN. INFO.:			GB 1987-4958	19870303 <--
OTHER SOURCE(S):	MARPAT 110:175499			

AB The title high efficiency process with good catalyst activity uses a catalyst system comprising a (a) Pt(II) compound, (b) a chelating ligand containing  $\geq 2$  P connected through a divalent bridging group having  $\geq 2$  C atoms, and (c) a protic acid having  $pK_a < 3$  with the exception of hydrogen halide acids and/or their metal salts, with the exception of halides of nonnoble transition metals or Group IVA elements. Reaction of 25 bar CO<sub>2</sub>, 25 bar C<sub>2</sub>H<sub>4</sub>, 50 mL diglyme, and 5 mL H<sub>2</sub>O in the presence of catalyst containing Pt(II) acetylacetonate 0.2, 1,3-bis(diphenylphosphino)propane 0.3, and Zr(SO<sub>4</sub>)<sub>2</sub> 1 mmol at 120° for 5 h produced 150 mol 3-pentanone/mol Pt-h. Catalyst selectivity was 95%.

L13 ANSWER 203 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, Bis-(1,3-diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalyst containing dicobalt octacarbonyl, for hydroformylation and amidocarbonylation of tetradecene and octene with acetamide and synthesis gas)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:154881 HCAPLUS  
DOCUMENT NUMBER: 110:154881  
ORIGINAL REFERENCE NO.: 110:25635a,25638a  
TITLE: Process for synthesis of amidoacids using a cobalt catalyst and a bidentate phosphine ligand  
INVENTOR(S): Lin, Jiang Jen

PATENT ASSIGNEE(S): Texaco Development Corp., USA  
SOURCE: Eur. Pat. Appl., 12 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 263624	A2	19880413	EP 1987-308490	19870925 <--
EP 263624	A3	19890419		
EP 263624	B1	19921209		
R: BE, DE, FR, GB, IT, NL				
US 4892687	A	19900109	US 1986-916770	19861008 <--
CA 1311244	C	19921208	CA 1987-545949	19870902 <--
JP 63101354	A	19880506	JP 1987-252638	19871008 <--
PRIORITY APPLN. INFO.:			US 1986-916770	A 19861008 <--

OTHER SOURCE(S): CASREACT 110:154881; MARPAT 110:154881

AB A process for producing a N-acetyl- $\delta$ -amino acids RCH(CO<sub>2</sub>H)NHAc (I; R = alkyl) or RCH(NAc)<sub>2</sub> comprises reacting an  $\alpha$ -olefin, an internal olefin, or allyl acetate with AcNH<sub>2</sub>, CO, and H in the presence of a Co-containing compound promoted by a bidentate phosphine ligand Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (n = 2,3,6) in a solvent at a pressure of at least 3.5 MPa (500 psi) and a temperature at least 50°. The process proceeds via olefin hydroformylation and amidocarbonylation. The above catalyst system provides advantages over the use of Co compds. alone such as improved yield of I, increased reaction rate, greater stability, and higher catalyst recovery. I are useful as surfactants and lubricants. The amino acid products of allyl acetate, i.e. AcO(CH<sub>2</sub>)<sub>3</sub>CH(CO<sub>2</sub>H)NHAc and AcOCH<sub>2</sub>CHMeCH(CO<sub>2</sub>H)NHAc, are useful in polyamide-ester synthesis. Thus, Co<sub>2</sub>(CO)<sub>8</sub>, Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>, 1-tetradecene (II), AcNH<sub>2</sub> and p-dioxane were placed in autoclave with stirring. The system was purged with a mixture of CO/H (1:1 molar ratio) and pressured to 100 psi. At 130°, the pressure was raised to 800 psi and maintained at this pressure for 4 h by incremental addition of CO/H mixture to give C<sub>14</sub>H<sub>29</sub>CH(CO<sub>2</sub>H)NHAc at ca. 85% selectivity over C<sub>14</sub>H<sub>29</sub>CH(NHAc)<sub>2</sub> based on converted II.

L13 ANSWER 204 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, Trimethylenebis(diphenylphosphine)

RL: USES (Uses)

(nickel or palladium polymerization catalyst removal by, from carbon monoxide-olefin copolymers)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:135916 HCAPLUS

DOCUMENT NUMBER: 110:135916

ORIGINAL REFERENCE NO.: 110:22459a, 22462a

TITLE: Catalyst residue removal from carbon monoxide-olefin copolymers

INVENTOR(S): Pino, Piero; Venanzi, Luigi; Wittwer, Heinz; Daum, Ulrich; Van Broekhoven, Johannes Adrianus Maria

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 285218	A2	19881005	EP 1988-200576	19880325 <--
EP 285218	A3	19901227		
EP 285218	B1	19941221		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
CH 673283	A5	19900228	CH 1987-1174	19870327 <--
US 4855401	A	19890808	US 1988-167926	19880314 <--
AU 8813567	A	19880929	AU 1988-13567	19880324 <--
AU 606665	B2	19910214		
JP 63273641	A	19881110	JP 1988-70847	19880324 <--
JP 2587856	B2	19970305		
CA 1295772	C	19920211	CA 1988-562333	19880324 <--
CA 1315458	C	19930330	CA 1988-562306	19880324 <--
CN 88101593	A	19881130	CN 1988-101593	19880325 <--
CN 1021451	C	19930630		
ES 2066779	T3	19950316	ES 1988-200576	19880325 <--
PRIORITY APPLN. INFO.:			CH 1987-1174	A 19870327 <--
			NL 1987-987	A 19870427 <--

OTHER SOURCE(S): MARPAT 110:135916

AB Residues of Pd or Ni catalysts are removed from the title polymers by treatment with complexing agents at temps.  $\geq 10^\circ$  above the polymerization temperature A CO-C<sub>2</sub>H<sub>4</sub>-C<sub>3</sub>H<sub>6</sub> terpolymer (I) was prepared by polymerization at 85° initiated by Pd(OAc)<sub>2</sub>, CH<sub>2</sub>[CH<sub>2</sub>P(C<sub>6</sub>H<sub>4</sub>OMe-o)<sub>2</sub>]<sub>2</sub>, and CF<sub>3</sub>CO<sub>2</sub>H. After polymerization was terminated, 0.08 mmol Ph<sub>3</sub>P in 6 mL MeOH was added and the autoclave was heated at 110° for 15 min, giving I containing 4.9 ppm Pd; vs. 10 when heated at 85°, and 24 when Ph<sub>3</sub>P was not added.

L13 ANSWER 205 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(catalyst, for polymerization of carbon monoxide with olefins)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:58288 HCAPLUS

DOCUMENT NUMBER: 110:58288

ORIGINAL REFERENCE NO.: 110:9663a,9666a

TITLE: Preparation of polymers of carbon monoxide with at least two comonomers for moldings

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: Neth. Appl., 18 pp.

CODEN: NAXXAN

DOCUMENT TYPE: Patent

LANGUAGE: Dutch

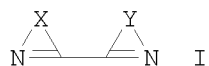
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 8602733	A	19880516	NL 1986-2733	19861030 <--
US 4818811	A	19890404	US 1987-89374	19870826 <--

CA 1315455	C	19930330	CA 1987-548847	19871008 <--
DK 8705660	A	19880501	DK 1987-5660	19871028 <--
NO 8704493	A	19880502	NO 1987-4493	19871028 <--
NO 170764	B	19920824		
NO 170764	C	19921202		
AU 8780429	A	19880505	AU 1987-80429	19871028 <--
AU 598311	B2	19900621		
BR 8705737	A	19880531	BR 1987-5737	19871028 <--
JP 63132937	A	19880604	JP 1987-272903	19871028 <--
CN 87107201	A	19880615	CN 1987-107201	19871028 <--
CN 1016697	B	19920520		
ZA 8708080	A	19880629	ZA 1987-8080	19871028 <--
EP 269154	A2	19880601	EP 1987-202086	19871029 <--
EP 269154	A3	19890607		
EP 269154	B1	19940126		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
EP 560463	A1	19930915	EP 1993-201373	19871029 <--
EP 560463	B1	19970122		
R: BE, DE, FR, GB, IT, NL				
EP 562698	A1	19930929	EP 1993-201374	19871029 <--
EP 562698	B1	19970924		
R: BE, DE, FR, GB, IT, NL				
AT 100835	T	19940215	AT 1987-202086	19871029 <--
PRIORITY APPLN. INFO.:			NL 1986-2733	A 19861030 <--
			EP 1987-202086	A 19871029 <--

GI



AB Polymers useful in production of polyamines, polyols, polyphenols, and polythiols are prepared by polymerization of CO with the olefins CH<sub>2</sub>:CR<sub>1</sub>R<sub>2</sub> and CH<sub>2</sub>:C(OR<sub>3</sub>)R<sub>1</sub>, CH<sub>2</sub>:CR<sub>1</sub>N(COR<sub>4</sub>)R<sub>2</sub>, CH<sub>2</sub>:CR<sub>1</sub>CONR<sub>2</sub>R<sub>4</sub>, CH<sub>2</sub>:CR<sub>1</sub>OPO(R<sub>3</sub>)(OR<sub>5</sub>), or CH<sub>2</sub>:CR<sub>1</sub>PO(OR<sub>3</sub>)(OR<sub>5</sub>) (R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> = H, hydrocarbyl; R<sub>3</sub>, R<sub>5</sub> = hydrocarbyl), using as catalysts Pd compds., anions of acids with pK<sub>a</sub> <4, and bidentate ligands R<sub>6</sub>R<sub>7</sub>PZPR<sub>8</sub>R<sub>9</sub> (R<sub>6</sub>-9 = hydrocarbyls, optionally bearing polar groups; Z = C≥2 organic group) or I (X, Y = bridging groups containing 3 or 4 atoms, ≥2 of which are C atoms). A CO-C<sub>2</sub>H<sub>4</sub>-vinyl Et ether terpolymer was prepared at 90°/15 bar using a catalyst containing Pd(OAc)<sub>2</sub> 0.1, Cu p-toluenesulfonate 0.5, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> 0.15, and 1,4-benzoquinone 2 mmol.

L13 ANSWER 206 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts, containing palladium, for carbonylation of butadiene)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:39519 HCAPLUS

DOCUMENT NUMBER: 110:39519

ORIGINAL REFERENCE NO.: 110:6605a,6608a

TITLE: Catalysts for preparation of adipate esters by carboxylation of butadiene

INVENTOR(S): Drent, Eit; Van Gogh, Johan

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 12 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 284170	A1	19880928	EP 1988-200578	19880325 <--
EP 284170	B1	19911016		
R: AT, BE, DE, FR, GB, IT, NL				
CA 1310664	C	19921124	CA 1988-561021	19880310 <--
US 4861912	A	19890829	US 1988-169698	19880318 <--
KR 141253	B1	19980701	KR 1988-3128	19880323 <--
AU 8813568	A	19880929	AU 1988-13568	19880324 <--
AU 609101	B2	19910426		
JP 63255245	A	19881021	JP 1988-68368	19880324 <--
CN 88101605	A	19881123	CN 1988-101605	19880324 <--
CN 1021815	C	19930818		
AT 68467	T	19911115	AT 1988-200578	19880325 <--
PRIORITY APPLN. INFO.:			GB 1987-7405	A 19870327 <--
			EP 1988-200578	A 19880325 <--

OTHER SOURCE(S): MARPAT 110:39519

AB Adipate diesters are prepared by carbonylating butadiene in the presence of alcs. and Pd catalysts and carbonylating the resulting pentenoate ester in the presence of another catalyst. Butadiene was carbonylated in the presence of a Pd(OAc)<sub>2</sub>-Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>4</sub>PPh<sub>2</sub> catalyst, 2,4,6-trimethylbenzoic acid, and EtOH at 150°/60 bar, giving Et pentenoates containing 90% 3-pentenoate. Recarbonylation in the presence of Co<sub>2</sub>(CO)<sub>8</sub>, 3,5-dimethylpyridine, and EtOH at 170°/60 bar for 5 h gave a 76% conversion with 82% selectivity to di-Et adipate.

L13 ANSWER 207 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalysts containing palladium acetate and, for carbonylation of butadiene)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:38623 HCAPLUS  
DOCUMENT NUMBER: 110:38623  
ORIGINAL REFERENCE NO.: 110:6423a,6426a  
TITLE: Process for the selective preparation of alkenecarboxylic acid derivatives  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 9 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 273489	A2	19880706	EP 1987-202334	19871125 <--
EP 273489	A3	19880720		
EP 273489	B1	19910724		
R: AT, BE, DE, FR, GB, IT, NL				
CA 1292475	C	19911126	CA 1987-552454	19871123 <--
AT 65489	T	19910815	AT 1987-202334	19871125 <--
AU 8782201	A	19880616	AU 1987-82201	19871208 <--
AU 597451	B2	19900531		
CN 87107325	A	19880622	CN 1987-107325	19871208 <--
CN 1032351	C	19960724		
JP 63156745	A	19880629	JP 1987-308829	19871208 <--
JP 2867137	B2	19990308		
US 5028734	A	19910702	US 1989-303596	19890127 <--
PRIORITY APPLN. INFO.:			NL 1986-3139	A 19861210 <--
			EP 1987-202334	A 19871125 <--
			US 1987-127330	B3 19871202 <--

OTHER SOURCE(S): MARPAT 110:38623

AB The title compds. were prepared by selective carbonylation of conjugated dienes in the presence of a hydroxy-containing compound such as H<sub>2</sub>O, alc., PhOH, or carboxylic acid, in the liquid phase in presence of an organic N-containing base-free catalyst system comprising a Pd compound and  $\geq 1$  multidentate organic P ligand R<sub>1</sub>R<sub>2</sub>PR<sub>3</sub>R<sub>4</sub> [R<sub>1</sub> - R<sub>4</sub> = (un)substituted hydrocarbyl; R = divalent organic bridging group with  $\geq 2$  C-atoms]. An autoclave was filled with EtOH, Ph<sub>2</sub>O, Pd(OAc)<sub>2</sub> and (Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub> followed by H<sub>2</sub>C:CHCH:CH<sub>2</sub> (I) and CO was added to an initial CO pressure of 60 bar, the autoclave heated to 155° for 5 h. The selectivity of I to MeCH:CHCH<sub>2</sub>CO<sub>2</sub>H (II) conversion was 95% and the II yield was 30% based on I.

L13 ANSWER 208 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: USES (Uses)

(charge control agent, electrostatog. toner containing, for good triboelec. characteristics and durability)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1989:15888 HCAPLUS

DOCUMENT NUMBER: 110:15888

ORIGINAL REFERENCE NO.: 110:2635a,2638a

TITLE: Toners for electrostatic image development containing an organic phosphorus compound as a positive charge-controlling agent

INVENTOR(S): Minamitani, Toshiki; Tsubushi, Kazuo; Tosaka, Hachiro; Ogawara, Makoto

PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 63125949 A 19880530 JP 1986-271597 19861114 <--  
 PRIORITY APPLN. INFO.: JP 1986-271597 19861114 <--  
 OTHER SOURCE(S): MARPAT 110:15888

AB Electrostatog. toners contain an organic P compound of the formula  
 $RR_1P(CH_2)_nPR_2R_3$  [I; R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> = H, C1-10 alkyl, (substituted) aryl,  
 aralkyl, amino; n = 1-10] as a pos. charge-controlling agent. The toners  
 exhibit good triboelec. characteristics and durability, and provide high  
 quality color images. Thus, a mixture of Bu methacrylate-styrene copolymer  
 100, polypropylene 5, C.I. Pigment Blue 15 5, and I (R = R<sub>1</sub> = R<sub>2</sub> = R<sub>3</sub> = Ph;  
 n = 4) 5 parts was kneaded, pulverized, and then mixed with a resin-coated  
 ferrite carrier to give an electrostatog. developer, which gave  
 high-quality images and showed excellent durability.

L13 ANSWER 209 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
 (catalyst, for reduction of allyl compds.)

RN 6737-42-4 HCAPLUS

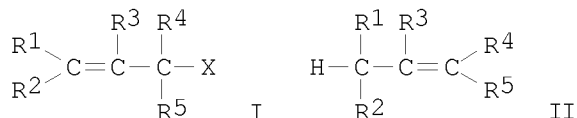
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$Ph_2P^-(CH_2)_3-PPh_2$

ACCESSION NUMBER: 1988:630256 HCAPLUS  
 DOCUMENT NUMBER: 109:230256  
 ORIGINAL REFERENCE NO.: 109:38069a,38072a  
 TITLE: Preparation of allylic derivatives as pharmaceutical  
 intermediates  
 INVENTOR(S): Takagaki, Hideji; Yamazaki, Keiji; Kotake, Hiroshi;  
 Inomata, Katsuhiko; Kinoshita, Hideki  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63122634	A	19880526	JP 1986-270205	19861113 <--
JP 07037396	B	19950426		

PRIORITY APPLN. INFO.: JP 1986-270205 19861113 <--  
 OTHER SOURCE(S): CASREACT 109:230256; MARPAT 109:230256  
 GI



AB Allyl compds. (I or II; R<sub>1</sub>-5 = H, alkyl, aryl, aralkyl, alkenyl, aryl; or  
 R<sub>1</sub>R<sub>4</sub> form a part of pentacyclyl or hexacyclyl; X = H) (III), useful as  
 pharmaceutical intermediates, are prepared To a mixture of  
 3-benzyl-3-p-tolylsulfonycyclohexene and PdCl<sub>2</sub>·[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub>] in  
 THF in N stream was added dropwise LiEt<sub>3</sub>BH in THF at .apprx.0° and

the reaction mixture, after addnl. stirring for 3 h, was added with aqueous NaOH, aqueous KCN, and then NaCl to give 89% III [R1R4 = (CH2)3, R2 = Ph, R3 = R5 = H].

L13 ANSWER 210 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for polymerization of carbon monoxide and polar monomers)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:591089 HCAPLUS  
 DOCUMENT NUMBER: 109:191089  
 ORIGINAL REFERENCE NO.: 109:31647a,31650a  
 TITLE: Polyketones from carbon monoxide and ethylenically unsaturated compounds and catalysts for their preparation  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 272727	A2	19880629	EP 1987-202327	19871124 <--
EP 272727	A3	19880720		
EP 272727	B1	19921028		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
AT 8603349	A	19910515	AT 1986-3349	19861216 <--
AT 393684	B	19911125		
US 4841020	A	19890620	US 1987-98652	19870921 <--
CA 1315456	C	19930330	CA 1987-551385	19871109 <--
AT 81861	T	19921115	AT 1987-202327	19871124 <--
ES 2056062	T3	19941001	ES 1987-202327	19871124 <--
DK 8706189	A	19880528	DK 1987-6189	19871125 <--
NO 8704901	A	19880530	NO 1987-4901	19871125 <--
NO 171642	B	19930104		
NO 171642	C	19930414		
AU 8781689	A	19880602	AU 1987-81689	19871125 <--
AU 595080	B2	19900322		
CN 87108013	A	19880615	CN 1987-108013	19871125 <--
CN 1023648	C	19940202		
JP 63154737	A	19880628	JP 1987-297293	19871125 <--
BR 8706365	A	19880726	BR 1987-6365	19871125 <--
ZA 8708839	A	19880727	ZA 1987-8839	19871125 <--
US 4948865	A	19900814	US 1989-314740	19890224 <--
PRIORITY APPLN. INFO.:			NL 1986-3015	A 19861127 <--
			US 1987-98652	A3 19870921 <--
			EP 1987-202327	A 19871124 <--

OTHER SOURCE(S): MARPAT 109:191089

AB The title linear polymers are prepared by polymerization of CO with compds. comprising α-alkenyl groups attached by bivalent hydrocarbylene groups to polar groups containing ≥1 O, N, P, or halogen atom. Separation

of the polar groups and alkenyl groups by the hydrocarbylene groups gives a higher reaction rate and polymers with higher polar monomer content. A CO-C<sub>2</sub>H<sub>4</sub>-10-undecenoic acid Me ester copolymer was prepared in MeOH at 90° using Pd(OAc)<sub>2</sub>, Cu p-tosylate, and 1,3-bis(diphenylphosphino)propane catalysts, giving polymerization rate 1420 g polymer/g Pd/h, vs. 164 using Me acrylate instead of undecenoic acid Me ester.

L13 ANSWER 211 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, with palladium compds. and nitro compds., for polymerization of carbon monoxide and olefins)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:591059 HCAPLUS  
 DOCUMENT NUMBER: 109:191059  
 ORIGINAL REFERENCE NO.: 109:31643a,31646a  
 TITLE: Palladium compound-containing polymerization catalysts  
 INVENTOR(S): Drent, Eit; Wife, Richard Lewin  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 272728	A2	19880629	EP 1987-202329	19871124 <--
EP 272728	A3	19891206		
EP 272728	B1	19930407		
R: BE, DE, FR, GB, IT, NL				
US 4806630	A	19890221	US 1987-99263	19870921 <--
CA 1313652	C	19930216	CA 1987-551447	19871110 <--
JP 63154738	A	19880628	JP 1987-303058	19871130 <--
JP 08026147	B	19960313		

PRIORITY APPLN. INFO.: NL 1986-3062 A 19861201 <--  
 OTHER SOURCE(S): MARPAT 109:191059

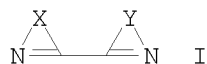
AB CO-olefinically unsatd. compound polymers are prepared using catalysts comprising Pd compds., anions of acids with pK<sub>a</sub> <6, bidentate ligands R<sub>1</sub>R<sub>2</sub>MR<sub>3</sub>R<sub>4</sub> [M = P, Sb, As; R<sub>1</sub>-4 = (polar-substituted)hydrocarbyl; R = C≥2 bivalent bridging group], and organic nitrites or nitro compds. C<sub>2</sub>H<sub>4</sub> (30 bar) and CO (to 60 bar) were polymerized at 25° for 3 h using a solution of Pd(OAc)<sub>2</sub> 0.1, Cu p-tosylate 0.5, 1,3-bis(diphenylphosphino)propane 0.15, and PhNO<sub>2</sub> (I) 10 mmol in 50 mL MeOH, giving 7.1 g polymer and polymerization rate 235 g polymer/g Pd-h, vs. 5.8 and 190, resp., without I.

L13 ANSWER 212 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts containing, for polymerization of olefins and carbon monoxide)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:493823 HCAPLUS  
DOCUMENT NUMBER: 109:93823  
ORIGINAL REFERENCE NO.: 109:15679a,15682a  
TITLE: Catalyst compositions and process for preparing  
olefin-carbon monoxide copolymers  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 8 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 254343	A1	19880127	EP 1987-201269	19870701 <--
R: BE, DE, FR, GB, IT, NL				
US 4804739	A	19890214	US 1987-66160	19870625 <--
JP 63012634	A	19880120	JP 1987-159925	19870629 <--
PRIORITY APPLN. INFO.:			NL 1986-1713	A 19860701 <--
OTHER SOURCE(S):	MARPAT	109:93823		
GI				



AB The title compns. comprise Pd compds., quaternary phosphonium salts of acids (other than hydrohalogenic acids) having pK<sub>a</sub> ≤2, and phosphorus bidentate ligands R<sub>2</sub>R<sub>1</sub>PZR<sub>3</sub>R<sub>4</sub> [R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = (polar group-substituted) hydrocarbyl; Z = bivalent C<sub>≥2</sub> organic group] or nitrogen bidentate ligands I (X, Y = bridging group having 3-4 atoms with ≥2 C). Introducing CO to 30 bar and C<sub>2</sub>H<sub>4</sub> to 60 bar into a reactor and heating at 90° for 5 h in the presence of 50 mL MeOH, 2.2 mmol methyltriphenylphosphonium p-tosylate (II), 0.1 mmol Pd acetate, and 0.15 mmol 1,3-bis(diphenylphosphine)propane gave 10 g copolymer at a rate of 200 g polymer/g(Pd)-h, whereas substituting II by Pr<sub>4</sub>N+ClO<sub>4</sub> gave no polymer product.

L13 ANSWER 213 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts containing, for homologation of methanol with synthesis gas)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:457033 HCAPLUS  
DOCUMENT NUMBER: 109:57033  
ORIGINAL REFERENCE NO.: 109:9587a,9590a

TITLE: Alcohol homologation  
 INVENTOR(S): Wegman, Richard W.; Moloy, Kenneth G.  
 PATENT ASSIGNEE(S): Union Carbide Corp., USA  
 SOURCE: U.S., 14 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4727200	A	19880223	US 1987-30741	19870327 <--
JP 01172351	A	19890707	JP 1987-319120	19871218 <--
JP 05000374	B	19930105		
CA 1285960	C	19910709	CA 1987-554881	19871218 <--
EP 283586	A2	19880928	EP 1987-119145	19871223 <--
EP 283586	A3	19900516		
EP 283586	B1	19930317		

R: DE, FR, GB, IT, NL

PRIORITY APPLN. INFO.: US 1987-30741 19870327 <--

OTHER SOURCE(S): CASREACT 109:57033

AB Reaction of alkanols with synthesis gas in presence of Rh, Ru, I and bis(diorganophosphino)alkanes provides one carbon homolog of alkanols. Thus, an autoclave charged with 0.52 g rhodium dicarbonyl acetylacetonate, 0.82 g RuCl<sub>3</sub> hydrate, 0.82 g 1,3-bis(diphenylphosphino)propane, 2.5 mL MeI, and 40 mL MeOH was heated at 140° and pressurized at 1000 psi (with 2:1 H-CO mixture) for 2.75 h, giving 3.3 mol/L-h realizable ethanol with 70.41% selectivity.

L13 ANSWER 214 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for polymerization of carbon monoxide and olefin)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:455446 HCAPLUS  
 DOCUMENT NUMBER: 109:55446  
 ORIGINAL REFERENCE NO.: 109:9359a,9362a  
 TITLE: Polymer preparation from carbon monoxide and olefin  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 5 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 262745	A2	19880406	EP 1987-201877	19870930 <--
EP 262745	A3	19880914		
EP 262745	B1	19970115		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
US 4831114	A	19890516	US 1987-74668	19870717 <--

CA 1308847	C	19921013	CA 1987-546991	19870916 <--
CN 87106659	A	19880413	CN 1987-106659	19870929 <--
AU 8779067	A	19880414	AU 1987-79067	19870929 <--
AU 594197	B2	19900301		
JP 63097629	A	19880428	JP 1987-245717	19870929 <--
JP 08032780	B	19960329		
BR 8705028	A	19880524	BR 1987-5028	19870929 <--
AT 147769	T	19970215	AT 1987-201877	19870930 <--

PRIORITY APPLN. INFO.:

NL 1986-2476 A 19861001 <--

OTHER SOURCE(S): MARPAT 109:55446

AB Polymers of CO and olefins are prepared at  $\leq 115^\circ$  with a catalyst composition comprising a Pd compound, an anion of an acid having pKa 2-4, and a bidentate ligand R1MR2ZMR3R4 (M = P, As, Sb; R1-R4 = hydrocarbyl; Z = bivalent organic group contg  $\geq 2$  C). Thus, a 300-mL autoclave containing Pd acetate 0.1, H3PO4 2, and H2C(CH2PPh2)2 0.15 mmol in 50 mL MeOH was charged with C2H4 to 30 bar and CO to 60 bar and heated 2.5 h at  $90^\circ$  to give 11 g copolymer, vs. 0.5 after polymerization at  $135^\circ$  for 5 h.

L13 ANSWER 215 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (catalysts containing cobalt compds. and, for amidocarbonylation of acrylates by acetamide and syngas)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1988:438240 HCAPLUS  
 DOCUMENT NUMBER: 109:38240  
 ORIGINAL REFERENCE NO.: 109:6491a,6494a  
 TITLE: A process for preparation of acetamidoglutarates as intermediates for glutamic acid from acrylates, amides, and syngas  
 INVENTOR(S): Lin, Jiang Jen  
 PATENT ASSIGNEE(S): Texaco Inc., USA  
 SOURCE: U.S., 6 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4720573	A	19880119	US 1986-891094	19860731 <--
CA 1316934	C	19930427	CA 1987-544550	19870814 <--
EP 313692	A1	19890503	EP 1987-309471	19871027 <--
EP 313692	B1	19920325		
R: BE, DE, FR, GB, IT, NL				
JP 01135750	A	19890529	JP 1987-278445	19871105 <--

PRIORITY APPLN. INFO.:

US 1986-891094 19860731 <--

OTHER SOURCE(S): CASREACT 109:38240; MARPAT 109:38240

AB AcNHCH(CO2H)CH2CH2CO2R (I; R = Me, Et), intermediates for glutamic acid, are prepared via reaction of an acrylate ester with an amide and synthesis gas in the presence of a catalyst comprising a Co-containing compound, a bisphosphine ligand, and a solvent at  $50-160^\circ$ , 500-5,000 psi. A mixture of Co(CO)8, bis-1,3-(diphenylphosphino)propane, MeO2CCH:CH2, AcNH2, EtOAc, and syngas was autoclaved at  $123-140^\circ$  and 800 psi for 4 h to

give a 1.25:1.0 mixture of AcNHCH(CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me and (AcNH)<sub>2</sub>CHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me. No amido acid products were observed when HRh(CO)(PPh<sub>3</sub>)<sub>3</sub> was used instead of Co(CO)<sub>8</sub>.

L13 ANSWER 216 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts containing, for manufacture of linear carbon monoxide copolymers)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:423531 HCAPLUS  
 DOCUMENT NUMBER: 109:23531  
 ORIGINAL REFERENCE NO.: 109:4037a,4040a  
 TITLE: Copolymers of carbon monoxide  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
 Neth.  
 SOURCE: Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 251373	A1	19880107	EP 1987-201109	19870611 <--
EP 251373	B1	19921028		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
CA 1316624	C	19930420	CA 1987-538477	19870601 <--
AT 81860	T	19921115	AT 1987-201109	19870611 <--
ES 2056060	T3	19941001	ES 1987-201109	19870611 <--
DK 8703108	A	19871221	DK 1987-3108	19870618 <--
NO 8702559	A	19871221	NO 1987-2559	19870618 <--
NO 168364	B	19911104		
NO 168364	C	19920212		
AU 8774483	A	19871224	AU 1987-74483	19870618 <--
AU 595891	B2	19900412		
CN 87104269	A	19880106	CN 1987-104269	19870618 <--
JP 63003025	A	19880108	JP 1987-150372	19870618 <--
JP 2567243	B2	19961225		
ZA 8704393	A	19880224	ZA 1987-4393	19870618 <--
BR 8703068	A	19880308	BR 1987-3068	19870618 <--
PRIORITY APPLN. INFO.:			NL 1986-1605	A 19860620 <--
			EP 1987-201109	A 19870611 <--

AB Linear CO copolymers with (A) ethylenically unsatd. hydrocarbon and (B) α,β-unsatd. carboxylic acid derivative at -COA:-COB- ratio (R) 10-400:1 are prepared at 20-200° and 1-200 bar pressure in the presence of a Pd compound, an anion of an acid (pK<sub>a</sub> ≤2, excluding hydrohalogenic acid), and a P or N bidentate ligand. A mixture of 40 mL MeOH, 0.1 mmol Pd(OAc)<sub>2</sub>, 2 mmol Cu p-tosylate, 0.15 mmol 1,3-bis(diphenylphosphine)propane, and 20 mL Me acrylate in an autoclave was fed with CO to 25 bar and ethylene to 50 bar and polymerized at 90° for 5 h to give 8.2 g terpolymer with mol. weight 3700, m.p. 235°, and R 23.

L13 ANSWER 217 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphine)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts containing, for polymerization of ethene with carbon monoxide)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:407119 HCAPLUS  
 DOCUMENT NUMBER: 109:7119  
 ORIGINAL REFERENCE NO.: 109:1352h,1353a  
 TITLE: Palladium-based catalysts for manufacture of carbon monoxide-olefin copolymers  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
 Neth.  
 SOURCE: Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 253416	A1	19880120	EP 1987-201152	19870615 <--
R: BE, DE, FR, GB, IT, NL				
US 4810774	A	19890307	US 1987-61615	19870615 <--
JP 63012633	A	19880120	JP 1987-153607	19870622 <--
US 4894435	A	19900116	US 1988-248066	19880923 <--
PRIORITY APPLN. INFO.:			NL 1986-1641	A 19860624 <--
			US 1987-61615	A3 19870615 <--

AB The title catalysts comprise in addition to Pd compds., acids other than hydrohalogenic acids, having pK<sub>a</sub> <2, and/or their metal salts, bidentate ligands R<sub>1</sub>R<sub>2</sub>MRMR<sub>3</sub>R<sub>4</sub> [M = P, As, or Sb; R<sub>1</sub>-4 = (substituted) hydrocarbyl; R = bivalent bridging group having ≥2 atoms in the bridge], and esters or ketones. Thus, CO was introduced to a reactor to 30 bar, pressurized with C<sub>2</sub>H<sub>4</sub> to 60 bar, heated to 80° in the presence of a catalyst containing Pd acetate 0.1, 1,3-bis(diphenylphosphine)propane 0.15, and K p-tosylate 1 mmol and 20 mL ethylene glycol diacetate, and polymerized at 80° for 5 h to give 16 g copolymer with melting temperature 257°.

L13 ANSWER 218 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for preparation of carbon monoxide-olefin polymers)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:407117 HCAPLUS  
 DOCUMENT NUMBER: 109:7117  
 ORIGINAL REFERENCE NO.: 109:1349a,1352a  
 TITLE: Catalysts for preparation of copolymers of carbon monoxide and olefins  
 INVENTOR(S): Doyle, Michael John; Van Ravenswaay-Classen, Johan

Christiaan; Rosenbrand, Gerrit Gerardus; Wife, Richard  
 Lewin  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
 Neth.  
 SOURCE: Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 248483	A2	19871209	EP 1987-201001	19870526 <--
EP 248483	A3	19880316		
EP 248483	B1	19910116		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
IL 82635	A	19910310	IL 1987-82635	19870522 <--
IN 170625	A1	19920425	IN 1987-DE446	19870522 <--
FI 8702297	A	19871128	FI 1987-2297	19870525 <--
FI 90783	B	19931215		
FI 90783	C	19940325		
ZA 8703726	A	19880831	ZA 1987-3726	19870525 <--
DK 8702697	A	19871128	DK 1987-2697	19870526 <--
NO 8702209	A	19871130	NO 1987-2209	19870526 <--
NO 168253	B	19911021		
NO 168253	C	19920129		
AU 8773406	A	19871203	AU 1987-73406	19870526 <--
AU 592872	B2	19900125		
CN 87104681	A	19871223	CN 1987-104681	19870526 <--
CN 1009652	B	19900919		
BR 8702703	A	19880301	BR 1987-2703	19870526 <--
US 4778876	A	19881018	US 1987-53780	19870526 <--
AT 60066	T	19910215	AT 1987-201001	19870526 <--
CA 1318440	C	19930525	CA 1987-537956	19870526 <--
JP 62285919	A	19871211	JP 1987-128554	19870527 <--
JP 08022915	B	19960306		
KR 9700486	B1	19970113	KR 1987-5349	19870527 <--
PRIORITY APPLN. INFO.:			NL 1986-1348	A 19860527 <--
			EP 1987-201001	A 19870526 <--

AB The title catalysts comprise Pd compds., anions of nonhydrohalogenic acids with  $pK < 2$ , and bidentate ligands R1R2MZMR3R4 [M = P, As, Sb; R1-4 = (polar substituted) hydrocarbyl; Z = C>2-containing divalent organic group] and optionally with an alc. are effective in the gas phase title preparation A 1:1 CO-C2H4 mixture was polymerized at 85°/55 bar for 21 h using a catalyst prepared by absorbing a solution of Pd(OAc)2 0.0095, 1,3-bis(diphenylphosphine)propane 0.0095, and p-toluenesulfonic acid 0.0190 mmol in 2 mL MeOH on 7 g CO-C2H4 copolymer (bulk d. 0.1 g/mL), giving a polymer with bulk d. 0.26 g/mL and limiting viscosity number 1.4 dL/g (100°, m-cresol).

L13 ANSWER 219 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (ligand, catalysts containing, for reductive carbamoylation of nitrobenzenes with amines and carbon monoxide)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:406236 HCAPLUS  
 DOCUMENT NUMBER: 109:6236  
 ORIGINAL REFERENCE NO.: 109:1172h,1173a  
 TITLE: Process and catalysts for manufacturing arylurea derivatives as agrochemicals  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 250037	A2	19871223	EP 1987-201108	19870611 <--
EP 250037	A3	19880921		
EP 250037	B1	19910904		
R: BE, CH, DE, FR, GB, LI, NL				
CA 1310953	C	19921201	CA 1987-538117	19870527 <--
JP 63005071	A	19880111	JP 1987-150371	19870618 <--
PRIORITY APPLN. INFO.:			GB 1986-15155	A 19860620 <--

AB XnC6H5-nNHCONR2 (R = alkyl; X = halo, alkyl, alkoxy, aryloxy, cyano, CF3, ester group; n = 0-5), useful as herbicides, plant growth regulators (no data), or as intermediates in the manufacture of urethanes, are prepared An autoclave was charged with 0.1 mol PhNO2, 0.075 mol Et2NH, 50 mL diglyme, 0.1 mmol Pd(OAc)2, 0.1 mmol Ph2P(CH2)3PPh2, and 10 mmol AcOH, pressurized with CO at 60 bar, and heated to 110° for 1 h to give PhNHCONEt2 with 44% selectivity and 95% PhNO2 conversion.

L13 ANSWER 220 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, Trimethylenebis(diphenylphosphine)  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, containing palladium compds., for polymerization of carbon monoxide with olefins)

RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1988:168150 HCAPLUS  
 DOCUMENT NUMBER: 108:168150  
 ORIGINAL REFERENCE NO.: 108:27663a,27666a  
 TITLE: Catalysts for polymerizing olefins with carbon monoxide  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 5 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 246683	A2	19871125	EP 1987-200733	19870415 <--
EP 246683	A3	19880127		
R: BE, DE, FR, GB, IT, NL				
JP 62267327	A	19871120	JP 1987-112649	19870511 <--
US 4740625	A	19880426	US 1987-49756	19870513 <--
PRIORITY APPLN. INFO.:		NL 1986-1198	A	19860513 <--

AB The title catalysts contain Pd compds. and the ligands R1R2MZMR3R4 (M = As, Sb, P; R1-4 = hydrocarbyl, optionally bearing polar groups; Z = C≥2 divalent organic group). Stirring 0.15 mmol Ph2P(CH2)3PPh2, 0.1 mmol Pd(OAc)2, and 4 mmol SnCl2 in 50 mL MeOH with 30 bar CO and 30 bar C2H4 at 100° for 5 h gave 15.0 g copolymer; vs. 0.7 with a (Ph3P)2PdCl2-SnCl2 catalyst.

L13 ANSWER 221 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts containing, for butadiene with carbon dioxide)

RN 6737-42-4 HCAPLUS

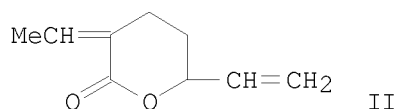
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P- (CH2)3- PPh2

ACCESSION NUMBER: 1988:166987 HCAPLUS  
 DOCUMENT NUMBER: 108:166987  
 ORIGINAL REFERENCE NO.: 108:27433a,27436a  
 TITLE: Preparation of mixtures of octadienyl esters of nonatrienoic acids  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 234668	A2	19870902	EP 1987-200327	19870225 <--
EP 234668	A3	19880706		
EP 234668	B1	19910403		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
AU 8769182	A	19870827	AU 1987-69182	19870224 <--
AU 596148	B2	19900426		
JP 62209042	A	19870914	JP 1987-39303	19870224 <--
AT 62221	T	19910415	AT 1987-200327	19870225 <--
PRIORITY APPLN. INFO.:		GB 1986-4789	A	19860226 <--
		EP 1987-200327	A	19870225 <--

GI



AB A process for the preparation of mixts. of octadienyl esters (I) of nonatrienoic acids by reaction of 1,3-butadiene with CO<sub>2</sub> was carried out in the presence of a solvent for the reactants and of a catalytic system prepared by combining: a) Pd and/or a Pd compound; b) R<sub>1</sub>R<sub>2</sub>MRMR<sub>3</sub>R<sub>4</sub> [M independently = P, As, or Sb; R = divalent organic bridging group with 3C atoms in the bridge and none have substituents causing steric hindrance; R<sub>1</sub>-R<sub>4</sub> = (un)substituted hydrocarbyl]; and c) an amine. A stirred autoclave containing MeCN, Pd(OAc)<sub>2</sub>, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub>, NEt<sub>3</sub>, and 1,3-butadiene was pressured with CO<sub>2</sub> to 30 bar and heated 5 h at 80° to give 55% conversion of 1,3-butadiene with following selectivities: I 68%, lactone II 7%, and octatrienes 24%. Omitting Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> gave no reaction after 5 h at 80°.

L13 ANSWER 222 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalyst system containing, for carbonylation of ethylenically unsatd. compds.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:166983 HCAPLUS

DOCUMENT NUMBER: 108:166983

ORIGINAL REFERENCE NO.: 108:27433a,27436a

TITLE: Process for the carbonylation of ethylenically unsaturated compounds

INVENTOR(S): Drent, Eit

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.

SOURCE: Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 227160	A2	19870701	EP 1986-202157	19861203 <--
EP 227160	A3	19870930		
EP 227160	B1	19900411		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
CA 1284658	C	19910604	CA 1986-524742	19861208 <--
JP 62158241	A	19870714	JP 1986-301927	19861219 <--
JP 2564123	B2	19961218		

PRIORITY APPLN. INFO.: GB 1985-31624 A 19851223 <--

AB A process was described for the carbonylation of an ethylenically unsatd. compound in which of the C atoms of the C:C in secondary or tertiary, with CO in the presence of H<sub>2</sub>O and/or an alkanol, which process is carried out in the presence of a catalytic system prepared by combining: a) Pd and/or a Pd compound; b) an acid with pK<sub>a</sub> <2.0 at 18° in aqueous solution, except hydrohalic and carboxylic acids; and c) a bidentate ligand R<sub>1</sub>R<sub>2</sub>MRMR<sub>3</sub>R<sub>4</sub> [M = P, As, Sb; R = C<sub>3</sub>-5 divalent organic bridging group, more of these C atoms carrying substituents which may cause steric hindrance; R<sub>1</sub> - R<sub>4</sub> = (un)substituted hydrocarbyl] and using a mol. ratio of acid with pK<sub>a</sub> <2.0 to said bidentate ligand of >0.5. In an example, a mixture of Et crotonate, PhMe, MeOH, (Pd(OAc)<sub>2</sub>, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>4</sub>PPh<sub>2</sub>, and 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H was reacted at 155°/40 bar to give 100% conversion of Et crotonate, at 180 mol Et

crotonate per mol Pd/h and 31% unbranched diester (di-Me, MeEt and di-Et glutarate).

L13 ANSWER 223 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4D, reaction product with palladium acetate  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for carbonylation of alkenes)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

ACCESSION NUMBER: 1988:131027 HCAPLUS  
DOCUMENT NUMBER: 108:131027  
ORIGINAL REFERENCE NO.: 108:21475a,21478a  
TITLE: Process for the preparation of ketones  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Brit. UK Pat. Appl., 6 pp.  
CODEN: BAXXDU  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
GB 2185740	A	19870729	GB 1986-1913	19860127 <--
PRIORITY APPLN. INFO.:			GB 1986-1913	19860127 <--
AB	Ketones are prepared by reaction of CO with alkenes in the presence of a catalytic system prepared by combining Pd or Pd carboxylates with R1R2MRMR3R4 (M = P, As, Sb; R = divalent organic bridging group having $\geq 2$ C's in the bridge and R1-4 = (un)substituted hydrocarbyl). An autoclave was charged with diglyme, Pd(II) acetate, (C6H5)2PCH2CH2CH2P(C6H5)2, Me2C6H4SO3H, and CO, heated to 135° to give a mixture of ketones.			

L13 ANSWER 224 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, Trimethylenebis(diphenylphosphine)  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for polymerization of carbon monoxide with olefins)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

ACCESSION NUMBER: 1988:76074 HCAPLUS  
DOCUMENT NUMBER: 108:76074  
ORIGINAL REFERENCE NO.: 108:12603a,12606a  
TITLE: Catalysts for polymerizing carbon monoxide with olefins  
INVENTOR(S): Van Broekhoven, Johannes Adrianus Maria; Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 5 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent

LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 239145	A2	19870930	EP 1987-200333	19870225 <--
EP 239145	A3	19880127		
EP 239145	B1	19911023		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
IN 168306	A1	19910309	IN 1987-DE131	19870216 <--
CA 1293241	C	19911217	CA 1987-529756	19870216 <--
AT 68798	T	19911115	AT 1987-200333	19870225 <--
ES 2025628	T3	19920401	ES 1987-200333	19870225 <--
BR 8700950	A	19871229	BR 1987-950	19870227 <--
DK 8701096	A	19870906	DK 1987-1096	19870303 <--
DK 165225	B	19921026		
DK 165225	C	19930322		
FI 8700927	A	19870906	FI 1987-927	19870303 <--
NO 8700875	A	19870907	NO 1987-875	19870303 <--
NO 167464	B	19910729		
NO 167464	C	19911106		
AU 8769645	A	19870910	AU 1987-69645	19870303 <--
AU 591759	B2	19891214		
JP 62212432	A	19870918	JP 1987-46951	19870303 <--
JP 08022912	B	19960306		
CN 87101642	A	19870930	CN 1987-101642	19870303 <--
CN 1010026	B	19901017		
ZA 8701518	A	19871028	ZA 1987-1518	19870303 <--
DD 257635	A5	19880622	DD 1987-300404	19870303 <--
HU 48650	A2	19890628	HU 1987-862	19870303 <--
HU 205958	B	19920728		
PL 151375	B1	19900831	PL 1987-264408	19870303 <--
US 4831113	A	19890516	US 1987-21946	19870305 <--
IL 81971	A	19901223	IL 1987-81971	19870323 <--
US 4851379	A	19890725	US 1988-185724	19880425 <--
PRIORITY APPLN. INFO.:			NL 1986-563	A 19860305 <--
			EP 1987-200333	A 19870225 <--
			US 1987-21946	A3 19870305 <--

AB The title catalysts, with high activity, contain Pd compds., acids (other than hydrogen halides) with pKa <2, bidentate phosphines, arsines, or stibines, and quinones. Stirring Pd(OAc)<sub>2</sub> 0.03, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> 0.036, 1,4-benzoquinone 0.3, and p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H 0.06 mmol in 18 mL MeOH with 1:1 CO-C<sub>2</sub>H<sub>4</sub> at 65°/55 bar for 1.5 h gave 22 g copolymer (3.6 kg/g Pd-h), vs. 15 without benzoquinone.

L13 ANSWER 225 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for polymerization of carbon monoxide and vinyl monomers)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:76068 HCAPLUS

DOCUMENT NUMBER: 108:76068

ORIGINAL REFERENCE NO.: 108:12599a,12602a

TITLE: Catalyst compositions

INVENTOR(S): Van Broekhoven, Johannes Adrian; Drent, Eit

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 7 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 235865	A2	19870909	EP 1987-200330	19870225 <--
EP 235865	A3	19880127		
EP 235865	B1	19911113		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
IN 168056	A1	19910126	IN 1987-DE132	19870216 <--
CA 1324456	C	19931116	CA 1987-529757	19870216 <--
AT 69454	T	19911115	AT 1987-200330	19870225 <--
ES 2026519	T3	19920501	ES 1987-200330	19870225 <--
BR 8700951	A	19871229	BR 1987-951	19870227 <--
DK 8701097	A	19870906	DK 1987-1097	19870303 <--
FI 8700928	A	19870906	FI 1987-928	19870303 <--
NO 8700876	A	19870907	NO 1987-876	19870303 <--
AU 8769646	A	19870910	AU 1987-69646	19870303 <--
AU 590823	B2	19891116		
JP 62212433	A	19870918	JP 1987-46952	19870303 <--
JP 08022913	B	19960306		
CN 87101643	A	19870930	CN 1987-101643	19870303 <--
CN 1013374	B	19910731		
ZA 8701519	A	19871028	ZA 1987-1519	19870303 <--
US 4824934	A	19890425	US 1987-21948	19870305 <--
US 4859645	A	19890822	US 1988-212030	19880623 <--
PRIORITY APPLN. INFO.:			NL 1986-564	A 19860305 <--
			EP 1987-200330	A 19870225 <--
			US 1987-21948	A3 19870305 <--

AB High-mol. weight carbon monoxide copolymers are prepared using a high activity catalyst system containing a Pd compound, a metal salt of acid (pKa <2, and hydrohalogenic acid excluded) or an acid-metal salt mixture, a bidentate ligand R1R2MRMR3R4 (M = P, As, or Sb; R1-4 = hydrocarbyl groups; R = C≥2 bridging group), and optionally a quinone. Thus, an autoclave charged with 50 mL MeOH, 0.1 mmol Pd(OAc)2, 0.15 mmol 1,3-bis(diphenylphosphine)propane, and 2 mmol p-toluenesulfonic acid was pressurized to 30 bar with CO, then to 60 bar with ethylene, and heated at 50° for 2 h to give 10 g copolymer with polymerization rate 500 g/g Pd/h.

L13 ANSWER 226 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: USES (Uses)

(ligand, complexation of, with rhodium carbonyl hydride coordination complexes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1988:40088 HCAPLUS

DOCUMENT NUMBER: 108:40088

ORIGINAL REFERENCE NO.: 108:6703a,6706a

TITLE: Selective hydroformylation process using alkyl diaryl phosphine rhodium carbonyl hydride catalysts

INVENTOR(S): Oswald, Alexis A.; Jermasen, Torris G.; Westner, Andrew A.; Huang, I Der  
 PATENT ASSIGNEE(S): Exxon Research and Engineering Co., USA  
 SOURCE: U.S., 61 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4687874	A	19870818	US 1980-120971	19800212 <--
US 4595753	A	19860617	US 1983-556610	19831130 <--
US 4668809	A	19870526	US 1985-742127	19850606 <--
US 4687866	A	19870818	US 1985-749807	19850628 <--
US 4593141	A	19860603	US 1985-756564	19850718 <--
PRIORITY APPLN. INFO.:			US 1979-11238	A2 19790212 <--
			US 1980-120971	A3 19800212 <--
			US 1982-374548	A3 19820503 <--
			US 1982-407050	A1 19820812 <--
			US 1985-742127	A3 19850606 <--

OTHER SOURCE(S): CASREACT 108:40088

AB Alkenes are hydroformylated to aldehydes in the presence of  
 [(Ar2PQ)bEyRy-b]g[Rh(CO)H]s [Ar = aryl; E = P(O), SO2, CO, CO2, O2C, N,  
 CONR9, R9NCO, OXP(Ox)2, OXP(O)(Ox)2, O, S; R9 = H, C1-30 alkyl, C6-10  
 aryl; R = C6-10 aryl, C1-30 alkyl, R4, R5OR6, COR7, COR8CO; R4-R8 =  
 divalent hydrocarbonyl radical, heterocyclic ring containing 5-6 atoms; Q =  
 divalent organic radical; b = 1-4; g = 3; s = 1; x = 0, 1; y = number of bonds  
 of group E available for bonding to Q and R; such that (y - b) > 0]  
 catalysts and synthesis gas having a high H/CO ratio. Thus,  
 tris(trimethylsilylethyl)diphenylphosphine)rhodiumcarbonyl hydride, prepared  
 by the complexation of 40 mmol of Me3SiCH2CH2PPh2 with a 0.4 mmol  
 RhCl3.3H2O in the presence of 40 mL 37% aqueous CHO solution, was contacted  
 with 1-butene and 4:1 H/CO mixture at 120°/350 psi, with a Rh/ligand M  
 ratio 140, and Rh concentration 106 ppm, producing 96.5% 1-butene conversion  
 with normal aldehyde/isoaldehyde product ratio 6.2.

L13 ANSWER 227 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts containing, for polymerization of carbon monoxide and ethylene)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1988:38604 HCAPLUS

DOCUMENT NUMBER: 108:38604

ORIGINAL REFERENCE NO.: 108:6479a,6482a

TITLE: Catalyst compositions

INVENTOR(S): Van Broekhoven, Johannes Adrian; Drent, Eit

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
 Neth.

SOURCE: Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 235866	A2	19870909	EP 1987-200332	19870225 <--
EP 235866	A3	19880127		
R: BE, DE, FR, GB, IT, NL				
JP 62212431	A	19870918	JP 1987-46950	19870303 <--
US 4824935	A	19890425	US 1987-21947	19870305 <--
US 4859644	A	19890822	US 1988-212032	19880623 <--
PRIORITY APPLN. INFO.:			NL 1986-562	A 19860305 <--
			US 1987-21947	A3 19870305 <--

AB Catalysts useful for polymerization of CO and ethylenically unsatd. compds. comprise a Pd compound, a main group metal salt of an acid with pKa <2 (except hydrohalogenic acid), a bidentate ligand R1R2MRMR3R4 [M = P, As, Sb; R1-R4 = hydrocarbyl groups (may be polar groups substituted); R = divalent bridging groups], and optionally an ether, which becomes an essential component when an alkali metal or an alkaline metal salt is involved. Thus an autoclave charged with 5.0 mL MeOH, 0.1 mmol Pd(OAc)2, 0.15 mmol 1,3-bis(diphenylphosphine)propane, 1 mmol K p-tosylate, and 10 mmol 18-crown-6 was pressurized with CO to 30 bar, then with ethylene to 60 bar, and heated at 80° for 5 h to give 13 g copolymer with a polymerization rate 325 g-h/g Pd.

L13 ANSWER 228 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4D, palladium complexes

RL: CAT (Catalyst use); USES (Uses)

(polymerization catalysts, removal of residues of, from ethylene copolymers)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1987:576676 HCAPLUS

DOCUMENT NUMBER: 107:176676

ORIGINAL REFERENCE NO.: 107:28387a,28390a

TITLE: Removal of palladium polymerization catalyst residues from carbon monoxide-ethylene copolymers

INVENTOR(S): Van Broekhoven, Johannes Adrianus Maria

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 224304	A1	19870603	EP 1986-202033	19861117 <--
EP 224304	B1	19901010		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
CA 1271291	A1	19900703	CA 1986-522018	19861103 <--
IN 167586	A1	19901117	IN 1986-DE975	19861105 <--
AT 57387	T	19901015	AT 1986-202033	19861117 <--
CN 86107929	A	19870527	CN 1986-107929	19861124 <--
CN 1009370	B	19900829		
DK 8605632	A	19870527	DK 1986-5632	19861124 <--

FI 8604773	A	19870527	FI 1986-4773	19861124 <--
FI 89933	B	19930831		
FI 89933	C	19931210		
AU 8665614	A	19870528	AU 1986-65614	19861124 <--
AU 589710	B2	19891019		
ZA 8608871	A	19870729	ZA 1986-8871	19861124 <--
BR 8605760	A	19870825	BR 1986-5760	19861124 <--
IL 80740	A	19900429	IL 1986-80740	19861124 <--
NO 168050	B	19910930	NO 1986-4690	19861124 <--
NO 168050	C	19920108		
JP 62131024	A	19870613	JP 1986-278951	19861125 <--
JP 06089131	B	19941109		
US 4791190	A	19881213	US 1986-935430	19861126 <--
PRIORITY APPLN. INFO.:			NL 1985-3259	A 19851126 <--
			EP 1986-202033	A 19861117 <--

AB Pd-phosphine polymerization catalyst residues are removed from the title copolymers by treating the copolymer suspension in an organic liquid with CO at  $\geq 60^\circ/\geq 0.1$  bar, so that the temperature is  $\geq 20^\circ$  higher than that at which the polymerization was effected. The presence of Pd contaminants adversely affects the stability of the copolymers during high-temperature processing (e.g., injection molding) by causing polymer discoloration and decomposition. Furthermore, Pd removal allows reuse of the catalyst, thus reducing the cost of polymer manufacture. An autoclave containing 170 mL MeOH was charged with 36 mL MeOH and Pd(OAc)<sub>2</sub> 0.06, (Ph<sub>2</sub>PCH<sub>2</sub>)<sub>3</sub>CM<sub>e</sub> 0.06, and 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H 0.12 mmol, the polymerization conducted at 65°/55 bars with a 1:1 CO-C<sub>2</sub>H<sub>4</sub> mixture for 1.5 h, the pressure released, the autoclave repressured with CO to 55 bars, the pressure released, the pressurization and release process repeated, the autoclave pressurized with CO to 3 bars, heated to 120°, and maintained under these conditions for 30 min. After cooling and release of the CO pressure, the copolymer was filtered off, washed with MeOH, and dried at 70°, producing 15 g copolymer having a Pd content of 123 ppm (which represents 29% of the total catalyst), vs. 475 ppm (95%) for a control polymerization not subjected to the CO post-treatment.

L13 ANSWER 229 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for alternating polymerization of carbon monoxide and alkenes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl]- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1987:554935 HCAPLUS

DOCUMENT NUMBER: 107:154935

ORIGINAL REFERENCE NO.: 107:24951a, 24954a

TITLE: Polymers of carbon monoxide and ethene

INVENTOR(S): Van Broekhoven, Johannes Adrian; Drent, Eit; Klei, Ebel

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 213671	A1	19870311	EP 1986-201422	19860815 <--
EP 213671	B1	19940427		
EP 213671	B2	20000705		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
IN 166314	A1	19900407	IN 1986-DE724	19860811 <--
AT 104998	T	19940515	AT 1986-201422	19860815 <--
CA 1318439	C	19930525	CA 1986-516248	19860819 <--
CN 86105214	A	19870304	CN 1986-105214	19860826 <--
DK 8604088	A	19870301	DK 1986-4088	19860827 <--
FI 8603477	A	19870301	FI 1986-3477	19860827 <--
FI 90434	B	19931029		
FI 90434	C	19940210		
NO 8603437	A	19870302	NO 1986-3437	19860827 <--
NO 168948	B	19920113		
NO 168948	C	19920422		
AU 8661886	A	19870305	AU 1986-61886	19860827 <--
AU 585057	B2	19890608		
JP 62053332	A	19870309	JP 1986-199197	19860827 <--
BR 8604072	A	19870407	BR 1986-4072	19860827 <--
ZA 8606501	A	19870429	ZA 1986-6501	19860827 <--
ES 2001402	A6	19880516	ES 1986-1389	19860827 <--
IL 79860	A	19910310	IL 1986-79860	19860827 <--
US 4868282	A	19890919	US 1988-190607	19880505 <--
US 4880903	A	19891114	US 1988-228429	19880805 <--
PRIORITY APPLN. INFO.:			NL 1985-2372	A 19850829 <--
			EP 1986-201422	A 19860815 <--
			US 1986-901917	A1 19860828 <--
			US 1988-190607	A3 19880505 <--

AB Polymers of CO, C2H4, and comonomers have a linear structure, random CO-C2H4 and CO-comonomer repeating units, and m.p. 150-245°. Heating 5 mL C3H6 in 200 mL MeOH with 1:1 CO-C2H4 and Pd(OAc)2 0.01, Ph3P(CH2)3PPh3 0.01, and CF3CO2H 0.2 mmol at 85°/55 bar for 7 h gave 21 g terpolymer with m.p. 238° and intrinsic viscosity 0.55 dL/g.

L13 ANSWER 230 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4D, Trimethylenebis(diphenylphosphine), complexes with palladium, toluenesulfonic acid salts  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for alternating polymerization of ethylene with sulfur dioxide)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1987:554921 HCAPLUS  
 DOCUMENT NUMBER: 107:154921  
 ORIGINAL REFERENCE NO.: 107:24951a,24954a  
 TITLE: Copolymers of sulfur dioxide and ethylene  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 220765	A1	19870506	EP 1986-201758	19861013 <--
EP 220765	B1	19900124		
R: BE, CH, DE, FR, GB, IT, LI, NL				
CA 1269794	A1	19900529	CA 1986-518706	19860922 <--
CN 86107083	A	19870415	CN 1986-107083	19861010 <--
CN 1010099	B	19901024		
AU 8663826	A	19870416	AU 1986-63826	19861013 <--
AU 588384	B2	19890914		
JP 62095321	A	19870501	JP 1986-242854	19861013 <--
JP 07055985	B	19950614		

PRIORITY APPLN. INFO.: NL 1985-2817 A 19851015 <--

AB Polymers of C<sub>2</sub>H<sub>4</sub>, SO<sub>2</sub>, and, optionally, CO and/or C<20 olefins are prepared by catalytic polymerization Successively adding 9 mmol 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H and 4.5 mmol Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> to 3 mmol Pd(OAc)<sub>2</sub> in 50 mL MeOH with stirring gave a solid catalyst. Stirring 0.1 mmol of this catalyst in 50 mL MeOH with 3.5 bar SO<sub>2</sub> and 26.5 bar C<sub>2</sub>H<sub>4</sub> at 120° for 5 h gave 1 g of an alternating copolymer with m.p. >300°.

L13 ANSWER 231 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (catalysts containing palladium compds. and, for hydrocarbonylation of alkenoates)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1987:553941 HCAPLUS  
 DOCUMENT NUMBER: 107:153941  
 ORIGINAL REFERENCE NO.: 107:24761a,24764a  
 TITLE: Process for the preparation of oxoalkanedioic acids or their diesters  
 INVENTOR(S): Drent, Eit  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Brit. UK Pat. Appl., 5 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2183631	A	19870610	GB 1985-29199	19851127 <--
US 4849542	A	19890718	US 1986-923998	19861028 <--

PRIORITY APPLN. INFO.: GB 1985-29199 A 19851127 <--

AB The title compds. were prepared by reacting alkenoates with CO/H in solution with a catalyst consisting of a Pd compound, a bidentate ligand R<sub>1</sub>R<sub>2</sub>MRMR<sub>3</sub>R<sub>4</sub> [R = organic bridging group; R<sub>1</sub>-R<sub>4</sub> = (un)substituted alkyl, aryl; M = P, As, Sb], and noncoordinating anions such as PF<sub>6</sub><sup>-</sup>, SbF<sub>6</sub><sup>-</sup>, BF<sub>4</sub><sup>-</sup>, or those from acids R<sub>5</sub>X(O)<sub>2</sub>OH [X = Cl, R<sub>5</sub> = O; X = S, R<sub>5</sub> = OH, (un)substituted hydrocarbyl], having pK<sub>a</sub> <2. A stirred autoclave was charged with H<sub>2</sub>C:CHCO<sub>2</sub>Me (I), Pd(OAc)<sub>2</sub>, CH<sub>2</sub>(CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub>, 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>H, and diglyme, purged and pressurized to 20 bar with CO, then to 40 bar with H, and maintained at 135° for 5 h. I conversion was 45% with selectivity

to CO(CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub> >90%.

L13 ANSWER 232 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst containing, for hydroformylation of octene)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1987:439199 HCAPLUS  
DOCUMENT NUMBER: 107:39199  
ORIGINAL REFERENCE NO.: 107:6547a,6550a  
TITLE: Process for the preparation of aldehydes  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 9 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 220767	A1	19870506	EP 1986-201781	19861014 <--
EP 220767	B1	19891102		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
US 4731487	A	19880315	US 1986-918243	19861014 <--
AT 47709	T	19891115	AT 1986-201781	19861014 <--
JP 62106038	A	19870516	JP 1986-253912	19861027 <--
ES 2002049	A6	19880701	ES 1986-2767	19861027 <--
PRIORITY APPLN. INFO.:			GB 1985-26613	A 19851029 <--
			EP 1986-201781	A 19861014 <--

AB Ethylenic unsatd. compds. are selectively hydroformylated to aldehydes with a very low amount of alkane byproduct in the presence of an aprotic solvent and a catalytic system of Pd, a Pd compound, and/or Pt, an anion of a carboxylic acid with a pKa <2, and a bidentate ligand R1R2MRMR3R4 (R = divalent organic C3 bridging group; R1, R2, R3, R4 = similar or dissimilar (un)substituted hydrocarbyl; M = P, As, Sb). An autoclave was charged with 1-octene, diglyme, Pd acetate, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> and CF<sub>3</sub>CO<sub>2</sub>H, pressurized with CO and H to 68 bar, and heated to 100° to give 1-nonanal (71.9% linearity, 100% selectivity to nonanals, and 41% octene conversion).

L13 ANSWER 233 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in preparation of precursor for sulfonated  
styrene-divinylbenzene copolymer-supported rhodium catalysts for asym.  
hydrogenation)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1987:409316 HCAPLUS  
 DOCUMENT NUMBER: 107:9316  
 ORIGINAL REFERENCE NO.: 107:1645a,1648a  
 TITLE: Hydrogenation catalyst  
 INVENTOR(S): Reiss, Jiri; Hetflejs, Jiri  
 PATENT ASSIGNEE(S): Czech.  
 SOURCE: Czech., 8 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Czech  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 231113	B1	19841015	CS 1982-6190	19820825 <--
PRIORITY APPLN. INFO.:			CS 1982-6190	19820825 <--

AB Hydrogenation catalysts with a high activity and efficiency in asym. hydrogenations are based on Rh complexes anchored to sulfonated styrene-divinylbenzene copolymers. They have the general formula Rh(olefin)mLp(O3SR), where the olefin is C2-8 alkene, C5-8 cycloalkene, or C4-12 diene [e.g., 1,5-cyclooctadiene (COD), norbornadiene, ethylene, or cyclooctene], L is the ligand Ph2PCHR1(CHR2)nPPh2 with R1, R2 = H, Me, or Ph, and n = 1-4 or Ph2PCH2CHOR3OCHCH2PPh2 with R3 = isopropylidene, cyclopentylidene, cyclohexylidene, or cyclooctylidene, which may be optically active, m = 0-2, and p = 1 or 2, where the number of coordination linkages to Rh is 4 and which are prepared by the reaction of acetylacetonate (acac)-olefin complexes of Rh with the ligand and sulfonated copolymer. A sulfonated copolymer containing 2% divinylbenzene (Lewatit SC102/H) 2.6, Rh(COD)(acac) 0.7, 1,2-bis(diphenylphosphino)ethane 0.9, and an EtOH-C6H6 mixture (1:1) 400 parts were shaken for 8 h and the copolymer was washed with the solvent mixture, giving a catalyst with 5% Rh which was used for hydrogenation of 1-octene in EtOH-C6H6 solution at 40° and 180 kPa; quant. conversion to octane was achieved after 2 h. Other ligands used were (R)-1,2-bis(diphenylphosphino)propane, 1,4-bis(diphenylphosphino)butane, (2S,3S)-2,3-bis(diphenylphosphino)butane, (R)-(+)-1,2-bis(diphenylphosphino)propane, and (S)-(-)-1,2-bis(diphenylphosphino)propane.

L13 ANSWER 234 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst, for methoxycarbonylation of alkadienes)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1987:119300 HCAPLUS  
 DOCUMENT NUMBER: 106:119300  
 ORIGINAL REFERENCE NO.: 106:19475a,19478a  
 TITLE: Selective synthesis of aliphatic dicarboxylic acid esters using palladium-phosphine or palladium-arsine catalysts  
 INVENTOR(S): Knifton, John F.  
 PATENT ASSIGNEE(S): Texaco Inc., USA  
 SOURCE: U.S., 11 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4629807	A	19861216	US 1986-826642	19860206 <--
PRIORITY APPLN. INFO.:			US 1986-826642	19860206 <--

OTHER SOURCE(S): MARPAT 106:119300

AB The title esters are prepared by selective dicarbonylation of nonconjugated C5-13  $\alpha,\omega$ -aliphatic dienes in the presence of a Pd-phosphine catalyst and a Pd-phosphine melt catalyst. The process improves the yield of aliphatic dicarboxylic acids, the recovery of the Pd catalyst, and solubilization of the catalyst components under ambient conditions. Thus, selective dicarbonylation of  $\text{H}_2\text{C}:\text{CH}(\text{CH}_2)_4\text{CH}:\text{CH}_2$  in the presence of  $\text{PdCl}_2(\text{PPh}_3)_2$ - $\text{PPh}_3$  gave  $\text{MeCH}(\text{CO}_2\text{Me})(\text{CH}_2)_4\text{CH}(\text{CO}_2\text{Me})\text{Me}$  13.3,  $\text{MeCH}(\text{CO}_2\text{Me})(\text{CH}_2)_5\text{CH}_2\text{CO}_2\text{Me}$  19.1, and  $\text{MeO}_2\text{C}(\text{CH}_2)_8\text{CO}_2\text{Me}$  6.0% (total concentration 38.4%; 94% yield).

L13 ANSWER 235 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with thiodiglycol and chlorouric acid)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

ACCESSION NUMBER: 1986:609209 HCAPLUS  
DOCUMENT NUMBER: 105:209209  
ORIGINAL REFERENCE NO.: 105:33739a,33742a  
TITLE:  $[\alpha,\omega\text{-Bis}(\text{diphenylphosphino})\text{hydrocarbon}]_{\text{bis}}$   
 $[(\text{thiosugar})\text{gold}]$  and  $\text{bis}[\text{selenosugar})\text{gold}]$   
derivatives

INVENTOR(S): Hill, David Taylor; Johnson, Randall Keith

PATENT ASSIGNEE(S): Snamprogetti SpA, USA

SOURCE: Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 189306	A2	19860730	EP 1986-300382	19860120 <--
EP 189306	A3	19890222		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4645756	A	19870224	US 1985-781438	19850927 <--
AU 8652487	A	19860731	AU 1986-52487	19860120 <--
AU 581954	B2	19890309		
ZA 8600429	A	19861126	ZA 1986-429	19860121 <--
DK 8600338	A	19860723	DK 1986-338	19860122 <--
JP 61172894	A	19860804	JP 1986-12970	19860122 <--
PRIORITY APPLN. INFO.:			US 1985-693416	A 19850122 <--
			US 1985-781438	A 19850927 <--

OTHER SOURCE(S): MARPAT 105:209209

GI



AB The title compds. I [R = thio- or selenosugar; Z = (CH<sub>2</sub>)<sub>n</sub>, cis CH:CH; n = 1-6], useful as antitumor agents, are prepared by substitution of II with a sodium thio- or selenosugar or by base hydrolysis of an acetylated derivative of I. Thus, 5.0 g II (Z = CH<sub>2</sub>CH<sub>2</sub>) in CHCl<sub>3</sub>/EtOH was treated with 2.53 g Na thioglucose under Ar to give 52% I (R = thio-β-D-glucopyranosato, Z = CH<sub>2</sub>CH<sub>2</sub>), which at 6 mg/kg i.p. in female mice over 10 days showed 98% inhibition of ADJ-PC6 plasmacytoma, vs. 100% for Cisplatin.

L13 ANSWER 236 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalyst containing palladium acetate and, for methoxycarbonylation of propyne)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1986:514620 HCAPLUS

DOCUMENT NUMBER: 105:114620

ORIGINAL REFERENCE NO.: 105:18538h,18539a

TITLE: Carbonylation of acetylenically unsaturated compounds

INVENTOR(S): Drent, Eit

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 186228	A1	19860702	EP 1985-201929	19851121 <--
EP 186228	B1	19890823		
R: BE, DE, FR, GB, IT, NL				
US 4739109	A	19880419	US 1985-802804	19851127 <--
CA 1263121	A1	19891121	CA 1985-496278	19851127 <--
JP 61152638	A	19860711	JP 1985-284543	19851219 <--
JP 05029212	B	19930428		

PRIORITY APPLN. INFO.: GB 1984-32376 A 19841221 <--

OTHER SOURCE(S): MARPAT 105:114620

AB The title compds. were carbonylated with CO in presence of an alc. and (or) H<sub>2</sub>O and of a liquid phase and in presence of a catalytic system containing Pd, organic phosphine, and a nonhydrohalogenic acid at 50-200°/1-100 bar. Thus, an autoclave was charged with MeOH, Pd(OAc)<sub>2</sub>, Ph<sub>3</sub>P, H<sub>3</sub>PO<sub>4</sub>, and anisole, and filled with MeC.tplbond.CH and CO at 2 and 20 bar partial pressure and heated to 115° to give CH<sub>2</sub>:CMeCO<sub>2</sub>Me (92% selectivity).

L13 ANSWER 237 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
(catalyst containing, for hydroformylation of alcs.)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1986:497008 HCAPLUS  
DOCUMENT NUMBER: 105:97008  
ORIGINAL REFERENCE NO.: 105:15665a,15668a  
TITLE: Aldehydes from alcohols  
INVENTOR(S): Wegman, Richard W.; Miller, Deborah S.  
PATENT ASSIGNEE(S): Union Carbide Corp., USA  
SOURCE: U.S., 7 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4594463	A	19860610	US 1985-695370	19850128 <--
PRIORITY APPLN. INFO.:			US 1985-695370	19850128 <--
OTHER SOURCE(S):			CASREACT 105:97008; MARPAT 105:97008	

AB Aldehydes were prepared by hydroformylation of ROH (R = C1-20 alkyl, C4-7 cycloalkyl, C6-18 aralkyl) at 100-300° under superatm. pressure in presence of catalysts consisting of a Rh soluble compound, an iodide containing compound, and a chelating compound R1R2E(CR3R4)nE1(R5)3-x (R1-R5 = H, organic moiety; E, E1 = Group V element; n = 1-4; x = 1-3). Thus, an autoclave was charged with Rh(CO)2C5H7O2 (C5H7O2 = acetylacetonate), iodine, Ph2PCH2CH2PPh2 and MeOH and heated to 180° at 1500 psi (1:1 H-CO) to give 50% MeCHO and 30% MeOAc.

L13 ANSWER 238 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with gold monochloride)

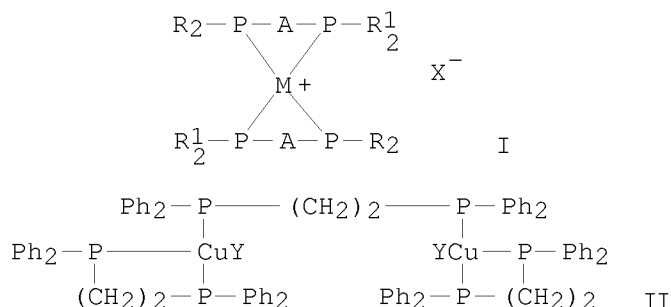
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1986:412101 HCAPLUS  
DOCUMENT NUMBER: 105:12101  
ORIGINAL REFERENCE NO.: 105:2021a,2024a  
TITLE: Tumor cell growth-inhibiting pharmaceutical compositions containing phosphino-hydrocarbon-gold, silver or copper complexes  
INVENTOR(S): Berners-Price, Susan Jane; Mirabelli, Christopher Kevin; Johnson, Randall Keith; Sadler, Peter John  
PATENT ASSIGNEE(S): SmithKline Beckman Corp., USA  
SOURCE: Eur. Pat. Appl., 37 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 164970	A2	19851218	EP 1985-303851	19850531 <--
EP 164970	A3	19861105		
EP 164970	B1	19890419		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
CA 1244764	A1	19881115	CA 1985-482640	19850529 <--
AT 42300	T	19890515	AT 1985-303851	19850531 <--
IL 75361	A	19891031	IL 1985-75361	19850531 <--
JP 61010594	A	19860118	JP 1985-121361	19850603 <--
HU 40446	A2	19861228	HU 1985-2152	19850603 <--
HU 196815	B	19890130		
HU 200930	B	19900928	HU 1988-4602	19850603 <--
DK 8502528	A	19851205	DK 1985-2528	19850604 <--
AU 8543267	A	19851212	AU 1985-43267	19850604 <--
AU 572665	B2	19880512		
ZA 8504206	A	19860430	ZA 1985-4206	19850604 <--
US 5037812	A	19910806	US 1986-873016	19860611 <--
PRIORITY APPLN. INFO.:			US 1984-616621	A 19840604 <--
			US 1985-718904	A 19850402 <--
			EP 1985-303851	A 19850531 <--
OTHER SOURCE(S):			MARPAT 105:12101	
GI				



AB Complexes I and II [R, R1 = Et, (un)substituted Ph; A = (CH2)n, cis-CH:CH; n = 2, 3; X = halogen, NO3, PF6; M = Au(I), Ag(I), Cu(I); Y = halogen, NO3], having tumor cell inhibiting effects, are prepared Thus, Na chloroaurate hydrate was reduced to Au(I) by thiodiglycol in aqueous Me2CO. After the solution became colorless, 1,2-bis(diphenylphosphino)ethane in Me2CO was added dropwise to give bis[1,2-bis(diphenylphosphino)ethane]bis[chlorogold(I)], which was added as a solid to a solution of 1,2-bis(diphenylphosphino)ethane in Me2CO to give bis[1,2-bis(diphenylphosphino)ethane]gold(I) chloride (III). The preparation of several other complexes was also described. An evaluation of 13 compds. in the melanoma in vitro assay and the leukemia in vivo assay showed significant cytotoxicity and antitumor activity. III was also tested in a mammary adenocarcinoma, plasmacytoma, and s.c. reticulum cell carcinoma. An injection was formulated containing III 1, dimethylacetamide 5, polyethoxylated castor oil 5 parts, and saline solution

L13 ANSWER 239 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, with acids and palladium acetate, for dimerization of olefins)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1986:406989 HCAPLUS  
DOCUMENT NUMBER: 105:6989  
ORIGINAL REFERENCE NO.: 105:1303a,1306a  
TITLE: Dimerization of olefins  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 19 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 170311	A2	19860205	EP 1985-201048	19850701 <--
EP 170311	A3	19860528		
EP 170311	B1	19890201		
R: BE, DE, FR, GB, NL				
CA 1249604	A1	19890131	CA 1985-486379	19850705 <--
JP 61047422	A	19860307	JP 1985-167354	19850729 <--
US 4634793	A	19870106	US 1985-783712	19851003 <--
PRIORITY APPLN. INFO.:			GB 1984-19407	A 19840730 <--
			GB 1984-28347	A 19841109 <--
			US 1985-754882	A2 19850715 <--

AB A C2-12 aliphatic monoolefin is dimerized in the liquid phase in a system consisting of H<sub>2</sub>O, an alc., or a carboxylic acid and a catalyst composed of a Pd compound, a compound with an acid anion (except hydrohalic acids) and an organic chelate ligand with 2 atoms of Group VA connected through a C2-6 chain. For example, Pd acetate 0.1, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> 0.15, and p-toluenesulfonic acid 2 mmol were fed into 50 mL MeOH with ethene at 40 bars at 95°. The conversion was 6000 mol ethene/g-atom Pd per h and the selectivity to dimer was 98 mol%.

L13 ANSWER 240 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: USES (Uses)  
(reaction of carbon monoxide with nitrogen-containing aromatic hydroxy  
compds.  
and other organic hydroxy compds. in presence of)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1986:187018 HCAPLUS  
DOCUMENT NUMBER: 104:187018  
ORIGINAL REFERENCE NO.: 104:29632h,29633a  
TITLE: Monomeric aromatic hydroxyurethanes  
INVENTOR(S): Stammann, Guenter; Grolig, Johann; Waldmann, Helmut  
PATENT ASSIGNEE(S): Bayer A.-G. , Fed. Rep. Ger.  
SOURCE: Ger. Offen., 40 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3406230	A1	19850829	DE 1984-3406230	19840221 <--
EP 153642	A2	19850904	EP 1985-101413	19850211 <--
EP 153642	A3	19860521		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
JP 60188360	A	19850925	JP 1985-28497	19850218 <--
PRIORITY APPLN. INFO.:			DE 1984-3406230	A 19840221 <--
OTHER SOURCE(S):	CASREACT 104:187018; MARPAT 104:187018			
AB The preparation of monomeric aromatic hydroxyurethanes (latent monomers) consists of reacting an aromatic compound ( $\geq 1$ phenolic OH, $\geq 1$ nitro, nitroso, azo, or azoxy group) with an organic OH compound and CO in the presence of a catalyst containing S and/or Se or a Group VIII metal and a complex ligand containing N and/or P. For example, EtOH 85.4, 4-O <sub>2</sub> NC <sub>6</sub> H <sub>4</sub> OH 12, pyridine 1.3, and active charcoal 1.3% were mixed with 1% (of charcoal weight) Pd. The conversion of nitrophenol was 10%, and the yield of Et (4-hydroxyphenyl)carbamate was 21%.				
L13	ANSWER 241 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN			
IT	6737-42-4D, nickel or palladium complexes			
	RL: CAT (Catalyst use); USES (Uses)			
	(catalysts, for polymerization of ethylene with carbon monoxide)			
RN	6737-42-4 HCAPLUS			
CN	Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)			

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1985:46423 HCAPLUS  
DOCUMENT NUMBER: 102:46423  
ORIGINAL REFERENCE NO.: 102:7317a,7320a  
TITLE: Polyketones  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 121965	A2	19841017	EP 1984-200327	19840308 <--
EP 121965	A3	19870603		
EP 121965	B1	19891227		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
AT 49010	T	19900115	AT 1984-200327	19840308 <--
CA 1239725	A1	19880726	CA 1984-449329	19840309 <--
AU 8426418	A	19841011	AU 1984-26418	19840404 <--
AU 563011	B2	19870625		
JP 59197427	A	19841109	JP 1984-66024	19840404 <--
JP 05087527	B	19931217		
BR 8401548	A	19841113	BR 1984-1548	19840404 <--
ZA 8402506	A	19841128	ZA 1984-2506	19840404 <--
US 4835250	A	19890530	US 1986-908899	19860918 <--

PRIORITY APPLN. INFO.: NL 1983-1213 A 19830406 <--  
 EP 1984-200327 A 19840308 <--  
 US 1984-596788 A1 19840404 <--

AB Polyketones are prepared by copolymn. of olefins or vinyl compds. with CO in the presence of a complex catalyst prepared by reaction of a Pd, Co, or Ni compound, and anion of an acid with pKa <2 that is not a carboxylic acid or hydrogen halide, and a bidentate ligand R1R2MZMR3R4, where M = P, As, or Sb, Z is a divalent organic bridging group containing ≥2 C in the bridge, and R1-R4 are hydrocarbon groups. Thus, a 250-mL autoclave containing Pd(OAc)2 0.1, Ph2P(CH2)3PPh2 0.15, and p-MeC6H4SO3H 2 mmols in 50 mL MeOH was pressurized with CO and ethylene to 20 and 30 bars, resp., and heated at 135° for 0.25 h to give carbon monoxide-ethylene copolymer [25052-62-4] of number-average mol. weight 2600 at a rate of 3000 g/g Pd-h, compared with no polymer when Ph3P was used as ligand.

L13 ANSWER 242 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
 (catalysts containing, for arylation of olefinic compds. with chlorobenzenes)

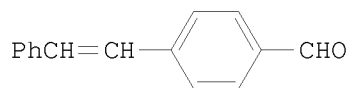
RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

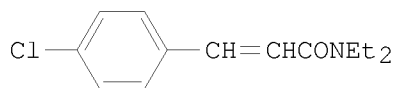
Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1984:472454 HCAPLUS  
 DOCUMENT NUMBER: 101:72454  
 ORIGINAL REFERENCE NO.: 101:11169a,11172a  
 TITLE: Arylation of olefins with aryl chlorides catalyzed by palladium  
 INVENTOR(S): Spencer, Alwyn  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G. , Switz.  
 SOURCE: Eur. Pat. Appl., 27 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 103544	A1	19840321	EP 1983-810401	19830902 <--
R: CH, DE, FR, GB, IT, LI				
JP 59065024	A	19840413	JP 1983-164263	19830908 <--
PRIORITY APPLN. INFO.:			CH 1982-5338	A 19820908 <--
GI				



I



II

AB Olefins and olefinic compds. such as CH2:CHR (R = CN, CO2Et, CONEt2) were arylated with aryl chlorides in an organic solvent in the presence of a base and a catalytic amount Pd compound. Thus, 1.41 g BzH, 1.33 mL CH2:CHCN, 1.64 g

NaOAc, 0.077 g Cl(4-OHCC6H4)Pd(Ph3P)2, 0.0525 g Ph3P, and 10 mL DMF were heated 6 h at 150° in a sealed tube to give 18% 4-OHCC6H4CH:CHCN (68:32 trans/cis). Data for runs covering a wide range of parameters were given; the 20 compds. prepared included, e.g., stilbene I and cinnamamide II.

L13 ANSWER 243 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(promoter, for ruthenium catalyzed carbamoylation of olefin in phosphonium or ammonium)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

ACCESSION NUMBER: 1984:472273 HCAPLUS

DOCUMENT NUMBER: 101:72273

ORIGINAL REFERENCE NO.: 101:11141a,11144a

TITLE: Alcohols and aldehydes by reacting olefins with carbon monoxide and hydrogen

INVENTOR(S): Knifton, John Frederick; Lin, Jiang Jen; Grigsby, Robert Allison, Jr.; Brader, Walter Howe, Jr.

PATENT ASSIGNEE(S): Texaco Development Corp. , USA

SOURCE: Eur. Pat. Appl., 54 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 107430	A2	19840502	EP 1983-306096	19831007 <--
EP 107430	A3	19840912		
EP 107430	B1	19860813		
R: BE, DE, FR, GB, NL				
US 4451679	A	19840529	US 1982-435812	19821021 <--
US 4451680	A	19840529	US 1982-435813	19821021 <--
US 4469895	A	19840904	US 1982-435814	19821021 <--
JP 59078131	A	19840504	JP 1983-173322	19830921 <--
JP 61014131	B	19860417		
ZA 8307678	A	19850227	ZA 1983-7678	19831014 <--
PRIORITY APPLN. INFO.:			US 1982-435812	A 19821021 <--
			US 1982-435813	A 19821021 <--
			US 1982-435814	A 19821021 <--

OTHER SOURCE(S): MARPAT 101:72273

AB Alcs. and aldehydes were prepared by treating C2-30 internal or terminal alkenes with CO and H at ≥50° and ≥7.5 bar using a Ru catalyst dispersed in a low melting quaternary phosphonium or ammonium base or salt, optionally with a tertiary amine or phosphine promoter. Thus, 2-octene was treated with 83.7 bar CO-H2 (1:2) at 180° for 6 h using a Ru(IV) oxide catalyst in Bu4PBr solvent to give a product containing 33.9, 29.7 wt% 1-nonenol, 2-methyloctanol, resp.

L13 ANSWER 244 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
(catalysts from dicobalt octacarbonyl and, for alkylation of secondary amines with olefins and carbon monoxide)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1984:121095 HCAPLUS  
DOCUMENT NUMBER: 100:121095  
ORIGINAL REFERENCE NO.: 100:18433a,18436a  
TITLE: Tertiary amines  
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58206544	A	19831201	JP 1982-90441	19820527 <--
PRIORITY APPLN. INFO.:			JP 1982-90441	19820527 <--
AB Tertiary amines were prepared by reaction of CO, H <sub>2</sub> O, olefins, and secondary amines in the presence of catalysts comprising organic P compds. and Co carbonyl compds. Thus, a mixture of 0.68 g Co <sub>2</sub> (CO) <sub>8</sub> , 0.71 g 1,2-bis(diphenylphosphino)ethane, 1 mL H <sub>2</sub> O, 20 mmol morpholine, 20 mmol MeCH:CH <sub>2</sub> , and 100 kg/cm <sup>2</sup> CO in dioxane was autoclaved 10 h at 150° to give 8.6 mmol N-butylmorpholine (mixture of normal and iso isomers). Similarly, prepared was N-butylpiperidine.				

L13 ANSWER 245 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts containing, for reduction of nitrobenzenes and N-alkoxycarbonylation of anilines)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1984:6109 HCAPLUS  
DOCUMENT NUMBER: 100:6109  
ORIGINAL REFERENCE NO.: 100:1043a,1046a  
TITLE: Carbamates using a palladium-containing catalyst  
INVENTOR(S): Drent, Eit; Van Leeuwen, Petrus W. N. M.  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
SOURCE: Eur. Pat. Appl., 23 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 86281	A1	19830824	EP 1982-201436	19821111 <--
EP 86281	B1	19850515		

EP 86281 B2 19881019  
 R: BE, DE, FR, GB, NL  
 CA 1229343 A1 19871117 CA 1982-415935 19821119 <--  
 JP 58135848 A 19830812 JP 1982-208719 19821130 <--  
 JP 03004064 B 19910122  
 US 4474978 A 19841002 US 1983-542805 19831017 <--

PRIORITY APPLN. INFO.: GB 1981-36371 A 19811202 <--  
 GB 1982-29812 A 19821019 <--  
 US 1982-409745 A2 19820819 <--

OTHER SOURCE(S): MARPAT 100:6109

AB Aromatic nitro compds. were treated with CO and alcs. and catalysts containing Pd

and/or Pd compds. and diphosphines, diamines, diarsines, and distibines to yield N-arylcarbamate esters. Thus, PhNO<sub>2</sub> was treated with MeOH, Pd acetate, Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>, and CO at 135° to give PhNHCO<sub>2</sub>Me.

L13 ANSWER 246 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (catalyst containing rhodium and, for isomerization of allylic amines to enamines)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1983:215832 HCAPLUS

DOCUMENT NUMBER: 98:215832

ORIGINAL REFERENCE NO.: 98:32825a,32828a

TITLE: Enamines or imines

INVENTOR(S): Otsuka, Seinosuke; Tani, Kazuhide; Yamagata, Tsuneaki; Akutagawa, Susumu; Kumobayashi, Hidenori; Yagi, Misao

PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd. , Japan

SOURCE: Eur. Pat. Appl., 36 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

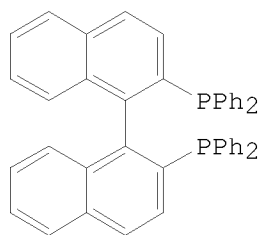
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 68506	A1	19830105	EP 1982-105826	19820630 <--
EP 68506	B1	19841121		
R: CH, DE, FR, GB, LI, NL				
JP 58004748	A	19830111	JP 1981-102039	19810630 <--
JP 62051945	B	19871102		
US 4695631	A	19870922	US 1982-393982	19820630 <--
IN 156506	A1	19850817	IN 1982-CA1500	19821228 <--
PRIORITY APPLN. INFO.:			JP 1981-102039	A 19810630 <--

OTHER SOURCE(S): CASREACT 98:215832; MARPAT 98:215832

GI



I

AB Enamines  $RR_1CHCR_2:CR_3NR_4R_5$  and imines  $RR_1CHCHR_2CR_3:NR_5$  [ $R-R_3 = H$ , (un)substituted alkyl, aryl;  $R_4 = H$ , alkyl, cycloalkyl;  $R_5 =$  alkyl, cycloalkyl;  $NR_4R_5 =$  heterocyclic] were prepared by isomerization of allyl amines  $RR_1C:CR_2CHR_3NR_4R_5$  in presence of a cationic Rh complex. Thus  $[RhLL_1]^+ ClO_4^-$  [ $L =$  norbornadiene,  $L_1 = (R)-(+) -I$ ] and (E)- $HOCMe_2(CH_2)_3CMe:CHCH_2NMe_2$  were heated at  $100^\circ$  to give 98% (E)- $HOCMe_2(CH_2)_3CHMeCH:CHNMe_2$  which was hydrolyzed to 99.9% D- $HOCMe_2(CH_2)_3CHMeCH_2CHO$ .

L13 ANSWER 247 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(benzylation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$Ph_2P-(CH_2)_3-PPh_2$

ACCESSION NUMBER: 1983:198452 HCAPLUS

DOCUMENT NUMBER: 98:198452

ORIGINAL REFERENCE NO.: 98:30175a,30178a

TITLE: Organic tertiary polyphosphine monooxides

INVENTOR(S): Abatjoglou, Anthony George; Kapicak, Louis Anthony

PATENT ASSIGNEE(S): Union Carbide Corp. , USA

SOURCE: Eur. Pat. Appl., 35 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 72560	A2	19830223	EP 1982-107439	19820816 <--
EP 72560	A3	19830720		
EP 72560	B1	19850116		
EP 72560	B2	19900314		
R: BE, DE, FR, GB, IT, NL, SE				
US 4429161	A	19840131	US 1981-293145	19810817 <--
CA 1212961	A1	19861021	CA 1982-407995	19820723 <--
JP 58039694	A	19830308	JP 1982-141186	19820816 <--
JP 63065072	B	19881214		

PRIORITY APPLN. INFO.: US 1981-293145 A 19810817 <--

OTHER SOURCE(S): MARPAT 98:198452

AB Alkylation of tertiary polyphosphines  $RR_1P[Y(PR_2R_3)aP(Y_1PR_4)bR_5]c(YPR_6)dR_7$  [ $R-R_7 =$  (un)substituted monovalent hydrocarbon radical (C1-30); Y, Y1 = organic bridging group containing C1-30 atoms and, optionally, heteroatoms; a, b,

d = 0, 1; c = 1-3] by monofunctional alkylating agents containing 1-30 C atoms (hydrocarbon halides or sulfates) gave monophosphonium salts, which were hydrolyzed in aqueous alkaline solution to form organic tertiary polyphosphine monooxides. Thus, alkylation of  $\text{Ph}_2\text{P}(\text{CH}_2)_n\text{PPh}_2$  ( $n = 1$ ) by  $\text{PhCH}_2\text{Br}$  in  $\text{PhMe}$  at  $80^\circ$  gave a white monophosphonium salt precipitate, which was hydrolyzed in aqueous  $\text{NaOH}$  to give  $\text{Ph}_2\text{P}(\text{CH}_2)_n\text{P}(\text{O})\text{Ph}_2$  (I;  $n = 1$ ). Also prepared were I ( $n$

=  
2, 3, 4, 5, 6) and cis- and trans- $\text{Ph}_2\text{PCH:CHP}(\text{O})\text{Ph}_2$ .

L13 ANSWER 248 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(hydroformylation catalyst containing cobalt, iodine, and, for methanol)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

ACCESSION NUMBER: 1983:197606 HCAPLUS

DOCUMENT NUMBER: 98:197606

ORIGINAL REFERENCE NO.: 98:30011a,30014a

TITLE: Catalyst and process for the conversion of methanol to acetaldehyde

INVENTOR(S): Argento, Benny John; Fiato, Rocco Anthony; Walker, Wellington Epler

PATENT ASSIGNEE(S): Union Carbide Corp. , USA

SOURCE: Eur. Pat. Appl., 41 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 68499	A1	19830105	EP 1982-105784	19820629 <--
EP 68499	B1	19850424		
R: DE, FR, GB, IT, NL				
US 4374752	A	19830222	US 1981-279158	19810630 <--
ZA 8203727	A	19830330	ZA 1982-3727	19820527 <--
CA 1176620	A1	19841023	CA 1982-404050	19820528 <--
JP 58011043	A	19830121	JP 1982-111864	19820630 <--

PRIORITY APPLN. INFO.: US 1981-279158 A 19810630 <--

OTHER SOURCE(S): MARPAT 98:197606

AB A catalyst system for producing  $\text{MeCHO}$  from  $\text{MeOH}$  contained a Co source, a halide source, an inert O-containing diluent, and  $\text{RR}_1\text{P}(\text{CH}_2)_n\text{PR}_2\text{R}_3$  ( $\text{R}-\text{R}_3$  = alkyl, cycloalkyl, aryl, aralkyl, alkaryl;  $\text{RR}_1$ ,  $\text{R}_2\text{R}_3$  = alkylene;  $n = 2-10$ ) or  $\text{PRR}_1\text{R}_2$ . Thus  $\text{MeOH}$  in  $(\text{EtOCH}_2\text{CH}_2)_2\text{O}$  was treated with  $\text{H-CO}$  (1.5:1) at 5000 psig and  $170^\circ$  in the presence of  $\text{Co}(\text{OAc})_2$ , iodine, and  $\text{PPh}_3$  to give 89.3% selectivity for  $\text{MeCHO}$  and  $\text{MeCH}(\text{OMe})_2$  at a rate of 4.9 g mol  $\text{L}^{-1}$  h $^{-1}$ . The presence of  $\text{PPh}_3$  in reactions run with  $\text{H-CO}$  (1.2:1) at 4000 psig and  $140^\circ$  in  $(\text{MeOCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2)_2\text{O}$  or 1,4-dioxane using  $\text{MeOH}$ ,  $\text{Co}(\text{OAc})_2$  and iodine reduced corrosion of Hastelloy B from 1.70 to 0.127 mm yr $^{-1}$ .

L13 ANSWER 249 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for ethanol manufacture from methanol)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1983:162810 HCAPLUS  
DOCUMENT NUMBER: 98:162810  
ORIGINAL REFERENCE NO.: 98:24699a,24702a  
TITLE: Selective production of ethanol  
INVENTOR(S): Habib, Mohammad M.; Pretzer, Wayne R.  
PATENT ASSIGNEE(S): Gulf Research and Development Co. , USA  
SOURCE: Ger. Offen., 22 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3228769	A1	19830224	DE 1982-3228769	19820802 <--
ZA 8204631	A	19831130	ZA 1982-4631	19820629 <--
FR 2510553	A1	19830204	FR 1982-13490	19820802 <--
JP 58026830	A	19830217	JP 1982-135061	19820802 <--
PRIORITY APPLN. INFO.:			US 1981-289405	A 19810803 <--

AB EtOH [64-17-5] is prepared by heating MeOH [67-56-1], CO, and H in the presence of Co, Iodine, Ru, and a P-containing ligand [RR1Z(CR2R3)n]xP(R4)3-x (R, R1, and R4 = alkyl, aryl, etc.; R2 and R3 = H, alkyl, etc.; Z = P or As; n = 1-8; x = 1-3). Thus, 100 mL MeOH containing Co(II) acetylacetonate [14024-48-7] 10, Ru acetylacetonate [14284-93-6] 1.0, Iodine 10, and Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub> [1663-45-2] 5 mmol was added to a 300 mL autoclave which was then pressurized to 13.65 MPa with a 2:1 (molar) H-CO mixture and heated at 215°/27.3 MPa for 1 h with the addition of the H-CO mixture, giving 58.1% conversion of MeOH. The reaction product contained 82.1% EtOH initially and 97.5% EtOH after conversion of AcH, Et<sub>2</sub>O, and AcOEt to EtOH.

L13 ANSWER 250 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: CAT (Catalyst use); USES (Uses)  
(catalysts containing, for conversion of methanol to aldehydes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 1983:71489 HCAPLUS  
DOCUMENT NUMBER: 98:71489  
ORIGINAL REFERENCE NO.: 98:10927a,10930a  
TITLE: Selectively producing aldehydes  
INVENTOR(S): Habib, Mohammad M.; Pretzer, Wayne R.  
PATENT ASSIGNEE(S): Gulf Research and Development Co. , USA  
SOURCE: U.S., 6 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4361707	A	19821130	US 1981-289418	19810803 <--
ZA 8204921	A	19830525	ZA 1982-4921	19820709 <--
CA 1186334	A1	19850430	CA 1982-408419	19820729 <--
FR 2510555	A1	19830204	FR 1982-13488	19820802 <--
JP 58026835	A	19830217	JP 1982-135059	19820802 <--
DE 3228822	A1	19830224	DE 1982-3228822	19820802 <--

PRIORITY APPLN. INFO.:

US 1981-289418 A 19810803 <--

OTHER SOURCE(S): MARPAT 98:71489

AB Aldehydes, particularly MeCHO, were prepared by the reaction of MeOH with CO and H at elevated temperature and pressure in the presence of Co, iodine, and a P-containing ligand. Thus, a mixture of 100 mL MeOH, 10 mmol cobaltous acetylacetonate, iodine, Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>, CO, and H (Co:ligand = 2:1; Co:iodine = 1:2; CO:H = 1:1) was heated at 200° and 4000 psig for 1.0 h to give 66% conversion of MeOH. The liquid product contained MeCHO 30.4, MeCH(OMe)<sub>2</sub> 1.1, EtCHO 1.2, MeOAc 28.7, PrCHO 7.8, and Me<sub>2</sub>O 7.4%.

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L13 ANSWER 1 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(chelation agent; manufacture of aromatic carbamates by reaction of

aromatic nitro

comps. with carbon monoxide and alcs. in presence of palladium

complexes, chelation agents, and phosphorus-containing acidic cocatalysts)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2005:266866 HCAPLUS

DOCUMENT NUMBER: 142:281948

TITLE: Manufacture of aromatic carbamates from aromatic nitro compounds

INVENTOR(S): Ragaini, Fabio; Cenini, Sergio; Querci, Cecilia

PATENT ASSIGNEE(S): Eni S.p.A., Italy; Enichem S.p.A.

SOURCE: Belg., 22 pp.

CODEN: BEXXAL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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BE 1013489	A6	20020205	BE 2001-165	20010315 <--
IT 2000MI0548	A1	20010917	IT 2000-MI548	20000317 <--
IT 1318396	B1	20030825		

PRIORITY APPLN. INFO.: IT 2000-MI548 A 20000317 <--

OTHER SOURCE(S): CASREACT 142:281948; MARPAT 142:281948

AB Aromatic carbamates are manufactured by reduction of aromatic nitro comps. with CO and a

compound having ≥1 OH group in the presence of (a) a Pd complex containing 2 N- or P-containing bidentate ligands and an anion, (b) a free chelation agent, and (c) ≥1 acid cocatalyst represented by: R<sub>1</sub>R<sub>2</sub>P(XH)X (R<sub>1</sub>, R<sub>2</sub> = XH, alkyl, or aryl; X = S or O) (such as H<sub>3</sub>PO<sub>4</sub>). The cocatalyst improves the activity and stability of the catalyst and reproducibility of the reaction.

L13 ANSWER 2 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (cyclization catalyst; process for preparation of  
 indolylpyridinylmethyldioxinoquinolines and related compds.)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:888742 HCAPLUS  
 DOCUMENT NUMBER: 137:384846  
 TITLE: Process for preparation of  
 indolylpyridinylmethyldioxinoquinolines and related  
 compounds  
 INVENTOR(S): Chan, Anita Wai-Yin; Curran, Timothy Thomas; Iera,  
 Silvio; Chew, Warren; Sellstedt, John Hamilton; Vid,  
 Galina; Feigelson, Gregg; Ding, Zhixian  
 PATENT ASSIGNEE(S): Wyeth, John and Brother Ltd., USA  
 SOURCE: PCT Int. Appl., 59 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002092602	A2	20021121	WO 2002-US15097	20020514 <--
WO 2002092602	A3	20030227		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2447150	A1	20021121	CA 2002-2447150	20020514 <--
AU 2002309769	A1	20021125	AU 2002-309769	20020514 <--
AU 2002309769	B2	20080417		
US 20020187983	A1	20021212	US 2002-145369	20020514 <--
US 6693197	B2	20040217		
EP 1387845	A2	20040211	EP 2002-736790	20020514 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
CN 1509290	A	20040630	CN 2002-810067	20020514 <--
BR 2002009901	A	20040713	BR 2002-9901	20020514 <--
JP 2004530693	T	20041007	JP 2002-589486	20020514 <--
MX 2003PA10524	A	20050307	MX 2003-PA10524	20031117 <--
US 20040186123	A1	20040923	US 2003-734867	20031212 <--
US 7038052	B2	20060502		
US 20060074240	A1	20060406	US 2005-282202	20051118 <--
US 7166723	B2	20070123		
US 20070123705	A1	20070531	US 2006-566528	20061204 <--
PRIORITY APPLN. INFO.:			US 2001-291547P	P 20010517 <--
			US 2002-145369	A3 20020514 <--
			WO 2002-US15097	W 20020514 <--

US 2003-734867

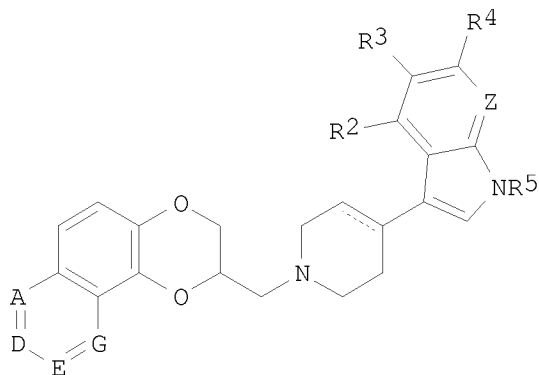
A3 20031212

US 2005-282202

A3 20051118

OTHER SOURCE(S):  
GI

CASREACT 137:384846; MARPAT 137:384846



I

AB Title compds. [I; R1 = H, OH, halo, cyano, carboxamido, carboalkoxy, alkyl, alkanoyloxy, amino, mono- or dialkylamino, alkanamido, alkanesulfonamido; R2, R3, R4, R6 = H, OH, halo, cyano, carboxamido, carboalkoxy, CF3, alkyl, alkoxy, alkanoyloxy, amino, mono- or dialkylamino, alkanamido, alkanesulfonamido; R5 = H, alkyl; dotted line = optional double bond; A, D = CR1, N; provided that  $\geq 1$  of A and D = N; E, G = CR1; Z = N, CR6], were prepared by a 7-step process. Thus, [(2R)-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinolin-2-yl]methyl 4-methylbenzenesulfonate (preparation given), 3-(1,2,3,6-tetrahydropyridin-4-yl)-1H-indole (preparation given) and K2CO3 were heated in THF:DMF at 80-83° for 10 h to give 72% (2S)-2-[4-(1H-indol-3-yl)-3,6-dihydro-2H-pyridin-1-ylmethyl]-8-methyl-2,3-dihydro-1,4-dioxino[2,3-f]quinoline.

L13 ANSWER 3 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(catalysts for the isomerization of branched unsatd. mononitriles into linear unsatd. mononitriles)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:832749 HCAPLUS

DOCUMENT NUMBER: 137:326815

TITLE: Method and catalysts for the isomerization of branched unsaturated mononitriles into linear unsaturated mononitriles

INVENTOR(S): Galland, Jean-Christophe; Metivier, Pascal

PATENT ASSIGNEE(S): Rhodia Polyamide Intermediates, Fr.

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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WO 2002085842      A2      20021031      WO 2002-FR1369      20020422 <--
WO 2002085842      A3      20031106
  W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
      CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
      GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
      LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
      PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
      UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
  RW:  GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
      KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
      GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
      GN, GQ, GW, ML, MR, NE, SN, TD, TG
FR 2823746          A1      20021025      FR 2001-5383          20010420 <--
FR 2823746          B1      20030523
AU 2002310711       A1      20021105      AU 2002-310711       20020422 <--
PRIORITY APPLN. INFO.:      FR 2001-5383          A 20010420 <--
                                WO 2002-FR1369          W 20020422 <--

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OTHER SOURCE(S):            MARPAT 137:326815

AB    A method for the isomerization of branched unsatd. mononitriles (e.g., 2-methyl-3-butenenitrile) into linear mononitriles (e.g., 2-pentenitrile) is described which is conducted in the gas phase at <170° and in the presence of a heterogeneous (i.e., supported) catalyst of Ni, Pd, or Pt (in oxidation state 0 or 1) and in the presence of a ligand containing 2-6 (un)substituted diphenylphosphino groups [e.g., 1,3-bis(diphenylphosphino)propane].

L13   ANSWER 4 OF 279   HCAPLUS   COPYRIGHT 2008 ACS on STN

IT    6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(catalysts; manufacture of polyketones with high mol. wts. in high yield)

RN    6737-42-4   HCAPLUS

CN    Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl-    (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER:            2002:827497   HCAPLUS  
DOCUMENT NUMBER:            137:326506  
TITLE:                      Manufacture of polyketones with high molecular weights  
                             in high yield  
INVENTOR(S):                Komatsu, Takashi; Taniguchi, Toru  
PATENT ASSIGNEE(S):        Asahi Kasei Corporation, Japan  
SOURCE:                      Jpn. Kokai Tokkyo Koho, 9 pp.  
                             CODEN: JKXXAF  
DOCUMENT TYPE:               Patent  
LANGUAGE:                   Japanese  
FAMILY ACC. NUM. COUNT:    1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002317044	A	20021031	JP 2001-119734	20010418 <--
PRIORITY APPLN. INFO.:			JP 2001-119734	20010418 <--

AB    The polyketones, useful for engineering plastics, fibers, etc., are manufactured by polymerization of CO with unsatd. compds. in the presence of catalysts comprising group 9, 10, or 11 transition metals and bidentate ligands bearing group 15 elements in water and water-soluble organic solvents, wherein water content is 1-10,000 ppm calculated by the following equation: 106 + [weight of water (g)]/[total volume of water-soluble organic solvents (ml)]

+ [volume of water (ml)]]]. Thus, CO was polymerized with ethylene in the presence of palladium acetate, 1,3-bis(diphenylphosphino)propane, and H<sub>2</sub>SO<sub>4</sub> in MeOH containing 3860 ppm water, filtered, washed, and dried to give a copolymer having intrinsic viscosity 3.03 dL/g at polymerization activity 6.0 kg/g-Pd-hr. Then, a dope of the copolymer was spun and stretched to give a yarn showing tensile strength 19.2 cN/dtex and initial elastic modulus 451 cN/dtex.

L13 ANSWER 5 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, Dppp

RL: CAT (Catalyst use); USES (Uses)

(chemical bond forming reactions using  $\alpha$ -halocarbonyl compds. and transmetalation reagents)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:778057 HCAPLUS

DOCUMENT NUMBER: 137:294761

TITLE: Chemical bond forming reactions using  $\alpha$ -halocarbonyl compounds and transmetalation reagents.

INVENTOR(S): Zhang, Xumu; Lei, Aiwon

PATENT ASSIGNEE(S): The Penn State Research Foundation, USA

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079339	A2	20021010	WO 2002-US9623	20020329 <--
WO 2002079339	A3	20040318		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002255967	A1	20021015	AU 2002-255967	20020329 <--
US 20020193543	A1	20021219	US 2002-108420	20020329 <--
US 6686428	B2	20040203		

PRIORITY APPLN. INFO.: US 2001-280275P P 20010330 <--  
WO 2002-US9623 W 20020329 <--

OTHER SOURCE(S): CASREACT 137:294761

AB A method of forming a chemical bond comprises combining  $\geq 1$   $\alpha$ -halocarbonyl compound with  $\geq 1$  transmetalation reagent comprising a target compound, and forming a chemical bond to or within the target compound. The transmetalation reagents are formed by the addition of a metal or metal catalyst to a target compound. The target compound is the compound undergoing chemical bond formation. Bond formation can be carried out in both intermol. or intramol. reactions. Thus, reaction of 3,5-dimethylphenylboronic acid in the presence of Pd<sub>2</sub>(dba)<sub>3</sub>.CHCl<sub>3</sub>,

rac-BINAP, and KF in dioxane gave 97% 3,3',5,5'-tetramethylbiphenyl.

L13 ANSWER 6 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(sulfonation; catalytic precipitate of alkaline earth salts with anionically  
charged active species onto support for organic reactions)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:777797 HCAPLUS  
DOCUMENT NUMBER: 137:296569  
TITLE: A novel catalytic formulation and its preparation  
INVENTOR(S): Chaudhari, Raghunath Vitthal; Mahajan, Avinash  
Narendra  
PATENT ASSIGNEE(S): Council of Scientific and Industrial Research, India  
SOURCE: PCT Int. Appl., 231 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002078842	A1	20021010	WO 2001-IN83	20010330 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,				
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,				
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,				
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,				
YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2442288	A1	20021010	CA 2001-2442288	20010330 <--
CA 2442288	C	20071211		
AU 2001258725	A1	20021015	AU 2001-258725	20010330 <--
AU 2001258725	B2	20080403		
GB 2389324	A	20031210	GB 2003-22868	20010330 <--
GB 2389324	B	20050817		
CN 1538876	A	20041020	CN 2001-823320	20010330 <--
JP 2005502446	T	20050127	JP 2002-577096	20010330 <--
NZ 528582	A	20060331	NZ 2001-528582	20010330 <--
US 20030092565	A1	20030515	US 2001-843814	20010430 <--
US 7026266	B2	20060411		
KR 756070	B1	20070907	KR 2003-712878	20030930 <--
PRIORITY APPLN. INFO.:			WO 2001-IN83	W 20010330 <--

AB The heterogeneous catalyst constitutes a solid support having deposited thereon a catalytically active material, which is practically insol. in variety of liquid media, the insol. material is constructed from secondary building blocks derived from suitable organometallic active components and the organometallic active component is molecularly modified so as to introduce  $\geq 2$  neg. charged functional groups, these molecularly modified organometallic components upon interaction with salts of Ca<sup>2+</sup>, Sr<sup>2+</sup>, and Ba<sup>2+</sup>, provide practically insol. solid material. Support materials, e.g. SiO<sub>2</sub> were suspended in aqueous 5% BaNO<sub>3</sub> solution, and 5 g were combined with BaNO<sub>3</sub> solution and a catalytic entity HRhCO(TPPTS)<sub>3</sub>, TPPTS =

triphenylphosphinetrisulfonate, to give a yellow precipitate containing 10.8 + 10-6 mol. Rh. This catalyst was effective in hydroformylation of 1-octene.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (titanium-based compns. containing phosphorus compds. used as catalysts for production of polyesters)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:676076 HCAPLUS  
 DOCUMENT NUMBER: 137:201720  
 TITLE: Titanium-based compositions containing phosphorus compounds as catalysts for production of polyesters  
 INVENTOR(S): Duan, Jiwen F.; Putzig, Donald E.; Mallon, Frederick K.; Davis, Timothy M.  
 PATENT ASSIGNEE(S): E. I. Du Pont de Nemours & Co., USA  
 SOURCE: PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002068497	A1	20020906	WO 2002-US711	20020109 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20020165336	A1	20021107	US 2001-792182	20010223 <--
US 6489433	B2	20021203		
TW 226894	B	20050121	TW 2001-90131504	20011219 <--
EG 23078	A	20040229	EG 2001-1381	20011231 <--
AU 2002246976	A1	20020912	AU 2002-246976	20020109 <--
EP 1373359	A1	20040102	EP 2002-714726	20020109 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1492894	A	20040428	CN 2002-805530	20020109 <--
JP 2004531594	T	20041014	JP 2002-568005	20020109 <--
US 20030045672	A1	20030306	US 2002-196065	20020716 <--
US 6541598	B2	20030401		
IN 2003MN00620	A	20050211	IN 2003-MN620	20030619 <--
KR 840089	B1	20080619	KR 2003-711062	20030822 <--
JP 2007284694	A	20071101	JP 2007-203581	20070803 <--
PRIORITY APPLN. INFO.:			US 2001-792182	A 20010223 <--
			JP 2002-568005	A3 20020109 <--
			WO 2002-US711	W 20020109 <--

OTHER SOURCE(S): MARPAT 137:201720

AB A composition is disclosed which comprises, or is produced by combining, (A) a titanium compound, (B) a component selected from (i) a complexing agent, (ii) a combination of a complexing agent, hypophosphorous acid or its salt, and, optionally, a first solvent, a zirconium compound, or both, (iii) combinations of (i) and (ii), (C) a phosphorus compound, and, optionally, (D) a second solvent. The titanium compound has the formula  $Ti(OR)_4$ , where each R is independently an alkyl group, a cycloalkyl group, arylalkyl group or combinations of two or more of these groups, the titanium compound preferably being tetraisopropyl titanate, tetra-n-Bu titanate or their combinations. The phosphorus compound is a polyphosphoric acid or salts, a phosphonate ester, a pyrophosphoric acid or salts, a pyrophosphorous acid or salts, or their combinations. These compns. are used as esterification, transesterification or polycondensation catalysts to produce polyesters having considerably lower yellowness and solids content than those produced using other titanium or antimony-based catalysts. Thus, poly(ethylene terephthalate) fibers were produced by polymerizing terephthalic acid and ethylene glycol in the presence of a catalyst system comprising tetraisopropyl titanate (Tyzor TPT) and potassium tripolyphosphate in ethylene glycol and having 0.1% Ti content.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(method for preparation of 6-substituted alkylamino-3-pyridylboric acid derivs. or salt thereof from dihalopyridines or aminohalopyridines as intermediates for anti-infective agent)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$Ph_2P-(CH_2)_3-PPh_2$

ACCESSION NUMBER: 2002:615624 HCAPLUS

DOCUMENT NUMBER: 137:169648

TITLE: 6-Substituted alkylamino-3-pyridylboric acid derivative or salt thereof and processes for producing them

INVENTOR(S): Kuroda, Hiroshi; Hayashi, Kazuya; Tohdo, Keisuke; Yokotani, Junichi; Takamatsu, Tamotsu

PATENT ASSIGNEE(S): Toyama Chemical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 66 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

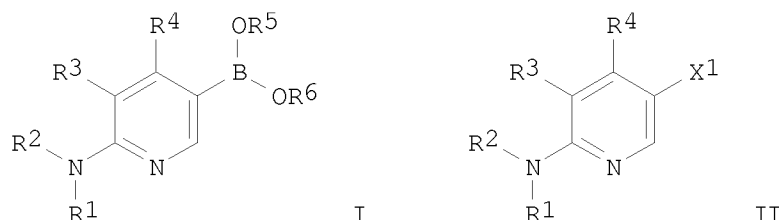
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2002062805	A1	20020815	WO 2002-JP972	20020206 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,			

BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2002230158 A1 20020819 AU 2002-230158 20020206 <--  
 JP 4061194 B2 20080312 JP 2002-563157 20020206 <--  
 PRIORITY APPLN. INFO.: JP 2001-31760 A 20010208 <--  
 JP 2001-111170 A 20010410 <--  
 WO 2002-JP972 W 20020206 <--  
 OTHER SOURCE(S): CASREACT 137:169648; MARPAT 137:169648  
 GI



AB The 6-substituted alkylamino-3-pyridylboric acid derivative or salt thereof represented by the general formula [I; R1 = (un)substituted alkylcarbonyl, arylcarbonyl, aralkyl; R2 = alkyl; R3, R4 = H, alkyl; R5, R6 = H, alkyl; or R5 and R6 together are a part of a formed ring containing B atom] is prepared by a few routes, e.g. alkylation of 2-amino-5-halopyridine derivative (II; R1 = R2 = H; R3, R4 = same as above; X = halo), reaction of the resulting compound II (R1 = H, R2 = alkyl; R3, R4, X = same as above) with R1-X2 or R1-O-R1a [R1 = (un)substituted alkylcarbonyl, arylcarbonyl, aralkyl; X2 = halo; R1a = H, (un)substituted alkylcarbonyl, arylcarbonyl, aralkyl], and reaction of the resulting compound II [R1 = (un)substituted alkylcarbonyl, arylcarbonyl, aralkyl; R2 = alkyl; X1 = halo; R3, R4 = H, alkyl] with alkyllithium, metal magnesium, or Grignard reagent followed by boration. The processes are useful for the industrial production of intermediates for a quinolonecarboxylic acid derivative or salt thereof useful as an antiinfective remedy. Thus, 116 g paraformaldehyde was added to a mixture of 495 g 28% NaOMe/MeOH and 120 mL MeOH and stirred at room temperature for 1 h, followed by adding dropwise a solution of 240 g 2-amino-5-bromo-3-methylpyridine in 600 mL MeOH over 1 h, and the resulting mixture was stirred at room temperature for 4 h, treated dropwise with 1,440 mL H2O over 1 h, cooled to 10°, and filtered to give 259 g N-(5-bromo-3-methyl-2-pyridyl)-N-(methoxymethyl)amine (III). III was dissolved in 475 g THF, treated with 31.1 g NaBH4 in portions over 45 min at room temperature, and stirred at room temperature for 2 h and under reflux for 1 h to give N-(5-bromo-3-methyl-2-pyridyl)-N-methylamine as a yellow solid which was dissolved in 950 mL toluene, successively treated with 130 g pyridine and 129 g pivaloyl chloride, refluxed for 9 h, cooled to room temperature, treated with 950 mL H2O, and adjusted to pH 11.0 with 5 M aqueous NaOH, followed by separating the organic layer, adding 950 mL H2O to the organic layer, and adjusting it to pH 1.5 with 6 M HCl to give 215 g N-(5-bromo-3-methyl-2-pyridyl)-N,2,2-trimethylpropanamide (IV). IV (26.0 g) was dissolved in 65 mL THF, treated with 20.6 g triisopropyl borate, cooled to -60°, treated dropwise with 70 mL 1.59 M n-butyllithium/hexane over 1 h, stirred at -60° for 1 h, warmed to 15°, treated dropwise with 130 mL 2 M aqueous HCl over 30 min to adjust pH to 4.5, stirred at 15° for 1 h, and treated with 5 M aqueous NaOH to adjust pH to 11.0, followed by separating the aqueous layer and adjusting the pH to 4.5 with 6 M aqueous HCl and filtering off

the precipitated crystals to give 18.2 g  
6-[(2,2-dimethylpropanoyl)(methyl)amino]-  
5-methyl-3-pyridylboric acid.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: TEM (Technical or engineered material use); USES (Uses)

(primers containing organic phosphine compds. and hindered phenol compds.

for

2-cyanoacrylate adhesives)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:606507 HCAPLUS

DOCUMENT NUMBER: 137:141555

TITLE: Primers containing organic phosphine compounds and  
hindered phenol compounds for 2-cyanoacrylate  
adhesives

INVENTOR(S): Nakayasu, Tatsuya; Ando, Hiroshi; Ohashi, Yoshiharu

PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002226781	A	20020814	JP 2001-22348	20010130 <--
JP 3775224	B2	20060517		

PRIORITY APPLN. INFO.: JP 2001-22348 20010130 <--

AB The primer giving good adhesion to 2-cyanoacrylate adhesives on nonpolar  
substrates, comprises an organic phosphine compound and a hindered phenol  
compound Thus, two piece of polypropylene plates were applied with a primer  
comprising a ethanol solution containing 1 part triphenylphosphine and 100 ppm  
2,6-di-tert-butyl-p-cresol, and bonded with a 2-cyanoacrylate adhesive,  
showing good tensile adhesion strength.

L13 ANSWER 10 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(preparation of diacetylpyridine derivs.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:566260 HCAPLUS

DOCUMENT NUMBER: 137:109213

TITLE: Preparation of diacetylpyridines

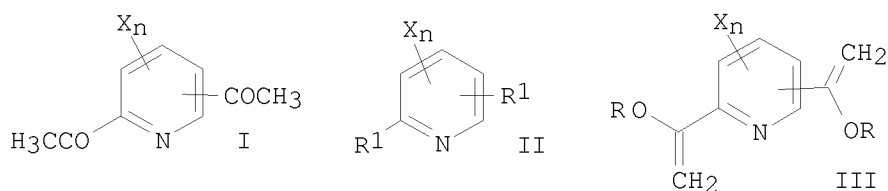
INVENTOR(S): Takaishi, Hideo; Kubota, Shuhei; Tsubata, Kenji; Kudo,  
Masaaki

PATENT ASSIGNEE(S): Nihon Nohyaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002212167	A	20020731	JP 2001-13098	20010122 <--
PRIORITY APPLN. INFO.:			JP 2001-13098	20010122 <--
OTHER SOURCE(S):	CASREACT 137:109213; MARPAT 137:109213			

GI



AB Title compds. I (X = H, alkyl, haloalkyl, alkoxy, haloalkoxy, cyano, nitro, alkoxy carbonyl, F, Ph, substituted Ph; n = 1, 2, 3) are prepared by reaction of dihalopyridines II (R1 = halo) with CH2:CHOR (R = alkyl) in the presence of Pd catalyst, phosphine, and base followed by acid hydrolysis of di(alkoxyvinyl)pyridines III.

L13 ANSWER 11 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(preparation of alkenylphosphonic acids via nickel phosphine complex catalyzed reaction of alkynes with phosphonic acids)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:349148 HCAPLUS

DOCUMENT NUMBER: 136:355346

TITLE: Process for the preparation of alkenylphosphonic acid derivatives

INVENTOR(S): Henkelmann, Jochem; Klass, Katrin; Arndt, Jan-Dirk

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1203773	A1	20020508	EP 2001-125713	20011027 <--
EP 1203773	B1	20040811		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
DE 10054218	A1	20020508	DE 2000-10054218	20001102 <--
AT 273316	T	20040815	AT 2001-125713	20011027 <--
ES 2225384	T3	20050316	ES 2001-125713	20011027 <--
US 20020077494	A1	20020620	US 2001-985114	20011101 <--
US 6534669	B2	20030318		
JP 2002179691	A	20020626	JP 2001-338322	20011102 <--
PRIORITY APPLN. INFO.:			DE 2000-10054218	A 20001102 <--

OTHER SOURCE(S): CASREACT 136:355346

AB The process for the preparation of alkenylphosphonic acid derivs. by the reaction of phosphonic acid derivs. with alkynes in the presence of complex catalyst system (nickel complex or nickel complex with phosphines) is described. Thus, Ni(acac)<sub>2</sub>/1,3-bis(diphenylphosphino)propane catalyzed reaction of ethyne with di-Me phosphonate in the presence of 2,6-di-tert-butyl-4-methylphenol as additive in tetraethylene glycol di-Me ether as solvent gave 86% di-Me ethylenephosphonate with 87% selectivity.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 12 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)  
(preparation of norbornylbenzenes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:284649 HCAPLUS  
DOCUMENT NUMBER: 136:294638  
TITLE: Preparation of norbornylbenzenes  
INVENTOR(S): Miura, Masahiro; Nomura, Masakatsu  
PATENT ASSIGNEE(S): Tosoh Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002114716	A	20020416	JP 2000-313129	20001006 <--
PRIORITY APPLN. INFO.:			JP 2000-313129	20001006 <--
OTHER SOURCE(S): CASREACT 136:294638; MARPAT 136:294638				

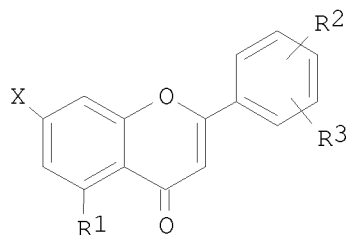
AB Aromatic compds. ArR<sub>n</sub> (Ar = aryl, heteroaryl, ferrocenyl; R = cyclic alkyl; n = 2-6) are prepared by reaction of aryl boron compds. with cycloolefins in the presence of catalysts containing Group 9 transition metal compds. and phosphines and bases. Phenylboronic acid was reacted with norbornene in the presence of [RhCl(cod)]<sub>2</sub>, 1,3-bis(diphenylphosphino)propane, and cesium fluoride in PhMe at 100° for 2 h to give 1,2-bis(norborn-2-yl)benzene 7, 1,2,3-tris(norborn-2-yl)benzene 10, and 1,2,3,4-tetrakis(norborn-2-yl)benzene 55%.

L13 ANSWER 13 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of 7-carboxyflavone derivs. and their therapeutic use for  
 rheumatic diseases)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

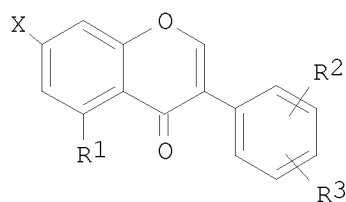
Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:275981 HCAPLUS  
 DOCUMENT NUMBER: 136:309800  
 TITLE: Method for preparation of 7-carboxyflavone derivatives  
 and their therapeutic use for rheumatic diseases  
 INVENTOR(S): Gesson, Jean-Pierre; Fonteneau, Nadia; Mondon,  
 Martine; Charbit, Suzy; Ficheux, Herve; Schutze,  
 Francois  
 PATENT ASSIGNEE(S): Negma-Lerads, Fr.  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028851	A1	20020411	WO 2001-FR3075	20011005 <--
W: AU, BG, BR, CA, CN, CZ, DZ, HU, ID, IL, IN, JP, KR, LT, LV, MA, MX, NO, NZ, PL, RO, RU, SG, SI, SK, US, VN, ZA				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
FR 2815033	A1	20020412	FR 2000-12846	20001006 <--
FR 2815033	B1	20030905		
CA 2424993	A1	20020411	CA 2001-2424993	20011005 <--
AU 2001093956	A	20020415	AU 2001-93956	20011005 <--
EP 1212313	A1	20020612	EP 2001-974441	20011005 <--
EP 1212313	B1	20030528		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
AT 241609	T	20030615	AT 2001-974441	20011005 <--
BR 2001014457	A	20031021	BR 2001-14457	20011005 <--
PT 1212313	T	20031031	PT 2001-974441	20011005 <--
ES 2199213	T3	20040216	ES 2001-974441	20011005 <--
JP 2004510770	T	20040408	JP 2002-532436	20011005 <--
MX 2003PA02986	A	20040524	MX 2003-PA2986	20030404 <--
US 20040059136	A1	20040325	US 2003-398187	20031003 <--
US 6965039	B2	20051115		
PRIORITY APPLN. INFO.:			FR 2000-12846	A 20001006 <--
			WO 2001-FR3075	W 20011005 <--
OTHER SOURCE(S):			CASREACT 136:309800; MARPAT 136:309800	
GI				



I



II

AB The invention concerns novel flavone and isoflavone derivs. I [X = COOR, PO(OR)<sub>2</sub>; R = H, alkaline, alkaline-earth metal, lower alkyl; R<sub>1</sub> = OH, lower alkoxy, acyloxy; R<sub>2</sub>, R<sub>3</sub>, identical or different, = H, halogen, CF<sub>3</sub>, CCl<sub>3</sub>, OH, C<sub>1</sub>-5-alkoxy, acyloxy ; R<sub>2</sub>R<sub>3</sub> = alkylenedioxy] and II useful for treating rheumatic diseases. Thus, I [R<sub>1</sub> = OH, R<sub>2</sub> = R<sub>3</sub> = H, X = CO<sub>2</sub>H] was prepared from via . Flavone I [R<sub>1</sub> = OH, R<sub>2</sub> = R<sub>3</sub> = H, X = CO<sub>2</sub>H] was tested for pharmacol. activity [96% inhibition of IL1β, 98% inhibition of IL6 and 32% inhibition of TNFα at 10 μM].

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 14 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, DPPP

RL: CAT (Catalyst use); USES (Uses)

(palladium catalyzed phosphination of dichlorodimethoxybiphenyldiyl bistriflate in presence of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:183791 HCAPLUS

DOCUMENT NUMBER: 136:232396

TITLE: Preparation of diphosphines as cocatalyst for asymmetric reactions

INVENTOR(S): Driessen-Hoelscher, Birgit; Kralik, Joachim; Ritzkopf, Inga; Steffens, Christian; Giffels, Guido; Dreisbach, Claus; Prinz, Thomas; Lange, Walter

PATENT ASSIGNEE(S): Bayer Ag, Germany

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

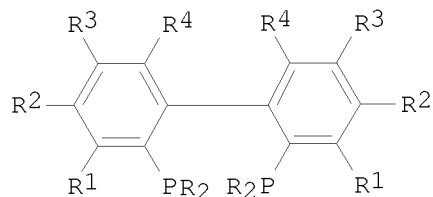
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1186609	A2	20020313	EP 2001-119799	20010829 <--
EP 1186609	A3	20021002		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 10044793	A1	20020404	DE 2000-10044793	20000911 <--
CA 2357261	A1	20020311	CA 2001-2357261	20010907 <--
US 20020055653	A1	20020509	US 2001-948826	20010907 <--
US 6462200	B2	20021008		

JP 2002179692	A	20020626	JP 2001-272410	20010907 <--
US 20030045713	A1	20030306	US 2002-219750	20020815 <--
US 6566298	B2	20030520		
US 20030181736	A1	20030925	US 2003-408493	20030407 <--
US 6844462	B2	20050118		

PRIORITY APPLN. INFO.: DE 2000-10044793 A 20000911 <--  
US 2001-948826 A3 20010907 <--  
US 2002-219750 A3 20020815 <--

OTHER SOURCE(S): CASREACT 136:232396; MARPAT 136:232396  
GI



I

AB The preparation of diphosphines I (R = N, O, S heteroatom containing C6-14 aryl, C1-6 alkyl, C1-6 alkoxy, and/or Me<sub>3</sub>Si group containing C6-13 heteroaryl, etc.; R<sup>1</sup>-R<sup>4</sup> = H, C1-10 alkyl, C1-10 alkoxy, F, Cl, Br etc.), useful as cocatalyst for transition metal catalyzed asym. reactions, is described. Thus, preparation of (5,5'-dichloro-6,6'-dimethoxybiphenyl-2,2'-diyl)bis(bis-3,5-dimethylphenyl-phosphine) (II) is described in several steps starting from 4-chloro-3-methoxyphenol. Reaction of II with (cyclooctadiene)Ru(η<sup>3</sup>-methallyl)<sub>2</sub> gave a catalyst which was used for asym. hydrogenation of di-Me itaconate.

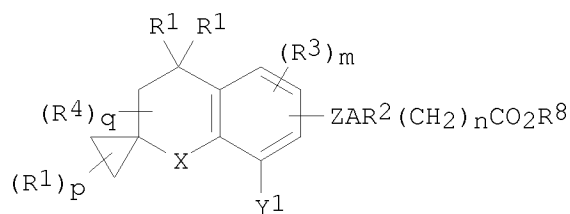
L13 ANSWER 15 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of tetrahydronaphthalenes, tetrahydroisoquinolines, chromans, spirobenzopyrancyclopropanes and related compds. as cytochrome P 450 RAI inhibitors)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:171877 HCAPLUS  
DOCUMENT NUMBER: 136:216646  
TITLE: Preparation of tetrahydronaphthalenes, tetrahydroisoquinolines, chromans, spirobenzopyrancyclopropanes and related compounds as cytochrome P 450 RAI inhibitors  
INVENTOR(S): Vasudevan, Jayasree; Johnson, Alan T.; Huang, Dehua; Wang, Liming; Chandraratna, Roshantha A.  
PATENT ASSIGNEE(S): Allergan Sales, Inc., USA  
SOURCE: PCT Int. Appl., 269 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 5

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018361	A2	20020307	WO 2001-US25443	20010814 <--
WO 2002018361	A3	20030731		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 6252090	B1	20010626	US 2000-651235	20000829 <--
US 6291677	B1	20010918	US 2000-651001	20000829 <--
US 6303785	B1	20011016	US 2000-651003	20000829 <--
US 6369261	B1	20020409	US 2000-651004	20000829 <--
US 6369225	B1	20020409	US 2000-651566	20000829 <--
US 6380256	B1	20020430	US 2000-651564	20000829 <--
US 6387951	B1	20020514	US 2000-651234	20000829 <--
CA 2420869	A1	20020307	CA 2001-2420869	20010814 <--
AU 2001086471	A	20020313	AU 2001-86471	20010814 <--
EP 1366036	A2	20031203	EP 2001-965920	20010814 <--
EP 1366036	B1	20060111		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004507531	T	20040311	JP 2002-523479	20010814 <--
AU 2001286471	B2	20060907	AU 2001-286471	20010814 <--
US 20020156082	A1	20021024	US 2002-79993	20020221 <--
US 6603019	B2	20030805		
US 20020160986	A1	20021031	US 2002-97368	20020314 <--
US 20020183285	A1	20021205	US 2002-97315	20020314 <--
US 20030186947	A1	20031002	US 2003-364225	20030211 <--
US 6713647	B2	20040330		
HK 1059439	A1	20060707	HK 2004-102361	20040331 <--
PRIORITY APPLN. INFO.:				
			US 2000-651001	A 20000829 <--
			US 2000-651003	A 20000829 <--
			US 2000-651004	A 20000829 <--
			US 2000-651234	A 20000829 <--
			US 2000-651235	A 20000829 <--
			US 2000-651564	A 20000829 <--
			US 2000-651566	A 20000829 <--
			WO 2001-US25443	W 20010814 <--
			US 2002-79993	A3 20020221 <--
OTHER SOURCE(S):				
GI				
MARPAT 136:216646				



AB Title compds., e.g., [I; A = (substituted) Ph, naphthyl, thienyl, furyl; X = O, S; Y1 = H, alkyl, PhCH<sub>2</sub>, fluoroalkyl, cycloalkyl, cycloalkylalkyl, Cl, Br, iodo; Z = C.tplbond.C, (CR1:CR1)<sub>n</sub>, CONR1, CO<sub>2</sub>, N:N, SCO, etc.; R1 = H, alkyl; n = 1-5; R2 = H, alkyl, F, Cl, Br, iodo, CF<sub>3</sub>, fluoroalkyl, alkoxy, alkylthio; R3 = alkyl, F, Cl, Br, iodo, fluoroalkyl, OH, SH, alkoxy, alkylthio, PhCH<sub>2</sub>; R4 = H, alkyl, F, fluoroalkyl, halo; R8 = H, alkyl, CH<sub>2</sub>OA; A = alkyl, cation; m, q = 0-2; n = 0-4], were prepared Thus, 8-cyclopropyl-6-ethynyl-3,4-dihydro-4,4-dimethylspiro[2H-1-benzopyran-2,1'-cyclopropane] (preparation given), Me 2-fluoro-4-iodophenylacetate (preparation given), Et<sub>3</sub>N, CuI, and (PPh<sub>3</sub>)<sub>2</sub>PdCl<sub>2</sub> were stirred in THF to give 46% Me 4-[[8-cyclopropyl-3,4-dihydro-4,4-dimethylspiro[2H-1-benzopyran-2,1'-cyclopropane]-6-yl]ethynyl]-2-fluorobenzeneacetate. This ester was stirred with NaOH in H<sub>2</sub>O/MeOH to give 100% 4-[[8-cyclopropyl-3,4-dihydro-4,4-dimethylspiro[2H-1-benzopyran-2,1'-cyclopropane]-6-yl]ethynyl]-2-fluorobenzeneacetic acid. The acid inhibited cytochrome P 450 RAI with IC<sub>50</sub> = 0.014 μM.

L13 ANSWER 16 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(method for preparing bis(trifluoromethyl)benzaldehydes)

RN 6737-42-4 HCAPLUS

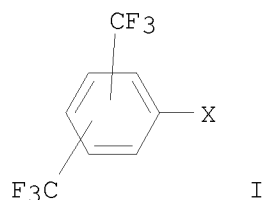
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2002:35802 HCAPLUS  
DOCUMENT NUMBER: 136:102182  
TITLE: Method for preparing bis(trifluoromethyl)benzaldehydes  
INVENTOR(S): Komata, Takeo  
PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002012572	A	20020115	JP 2000-193314	20000627 <--
US 20020042541	A1	20020411	US 2001-888624	20010626 <--
PRIORITY APPLN. INFO.:			JP 2000-193314	A 20000627 <--
OTHER SOURCE(S):			CASREACT 136:102182; MARPAT 136:102182	

GI



AB The title compds. are prepared by reacting bistrifluoromethylbenzene derivative

I [X = halo, etc.] with carbon monoxide and hydrogen in the presence of palladium and phosphine catalysts and a base. The title compds. are useful as intermediates for pharmaceuticals, agrochems., and functional materials. Thus, reaction of 3,5-bis(trifluoromethyl)iodobenzene 70 g in DMF 140 g with carbon monoxide/hydrogen (1:1 mixture) (1.5 MPa) in the presence of palladium acetate 0.46 g, tri-o-tolylphosphine 2.5 g, and triethylamine 23 g at 125° for 5 h gave, after workup and distillation, 3,5-bis(trifluoromethyl)benzaldehyde 21 g.

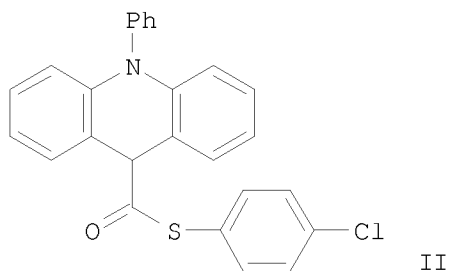
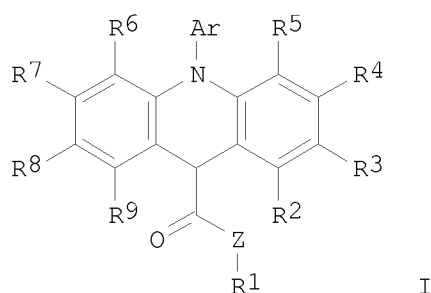
L13 ANSWER 17 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, DPPP  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactant; processes and synthetic intermediates for preparing  
 N-arylacridancarboxylic acid derivs.)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:763541 HCAPLUS  
 DOCUMENT NUMBER: 135:303787  
 TITLE: Processes and synthetic intermediates for preparing  
 n-arylacridancarboxylic acid derivatives  
 INVENTOR(S): Akhavan-tafti, Hashem; Eickholt, Robert A.; Handley,  
 Richard S.  
 PATENT ASSIGNEE(S): Lumigen, Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S.  
 Ser. No. 557,726.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20010031869	A1	20011018	US 2001-770015	20010125 <--
US 6410732	B2	20020625		
CN 1180349	A	19980429	CN 1997-190142	19970115 <--
JP 2001158794	A	20010612	JP 2000-287789	19970115 <--
US 6045727	A	20000404	US 1997-894143	19970813 <--
US 6090571	A	20000718	US 1999-358002	19990721 <--
US 6296787	B1	20011002	US 2000-557726	20000426 <--
CN 1312252	A	20010912	CN 2000-128335	20001117 <--
WO 2002059096	A1	20020801	WO 2001-US44700	20011207 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,				
UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,				
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,				
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002227015	A1	20020806	AU 2002-227015	20011207 <--
AU 2002227015	B2	20060316		
EP 1353908	A1	20031022	EP 2001-995974	20011207 <--
EP 1353908	B1	20060308		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

JP 2004517924	T	20040617	JP 2002-559398	20011207 <--
AT 319690	T	20060315	AT 2001-995974	20011207 <--
AU 2003203905	A1	20030612	AU 2003-203905	20030428 <--
AU 2003203905	B2	20040401		
PRIORITY APPLN. INFO.:			US 1996-585090	B2 19960116 <--
			US 1996-683927	B2 19960719 <--
			US 1997-894143	A3 19970813 <--
			US 1999-358002	A1 19990721 <--
			US 2000-557726	A2 20000426 <--
			JP 1997-526021	A3 19970115 <--
			WO 1997-US15	W 19970115 <--
			AU 1999-61779	A3 19991130 <--
			US 2001-770015	A 20010125 <--
			WO 2001-US44700	W 20011207 <--
OTHER SOURCE(S):			CASREACT 135:303787; MARPAT 135:303787	
GI				



AB A process is disclosed for preparation of I [R1 = (hetero)alkyl, aralkyl, (hetero)aryl; Z = O, S or the group ZR1 = NR10R11; R10-11 = alkyl, aryl, aralkyl, alkylsulfonyl, arylsulfonyl groups and wherein R10-11 can be combined with N into a heterocycle with leaving group ability; R2-9 = substituents which contain from 1 to 50 atoms selected from C, H, N, O, S, P and halogen atoms; Ar = aryl, heteroaryl]. Examples include 28 synthetic examples, determination of light intensity-time profiles of example compds. with horseradish peroxidase (HRP, 13 examples) and an assay for chemiluminescent detection of proteins by Western Blot. The process involves: (i) reduction of an acridone using a reducing agent (e.g. Na/Hg amalgam, NH2NH2, etc.), (ii) converting the acridan to an N-aryl derivative acridan using (e.g.) an arylsulfonate and palladium catalyst (e.g., P(t-Bu)3, DPPF, DPPE, etc.), (iii) reaction of the N-arylacridan with a base and capturing the resulting anion with CO2 to produce the carboxylic acid derivative of I, and (iv) converting the carboxy derivative to I via coupling with (e.g.) a carbodiimide and R1ZH. Alternatively, N-arylation may be done prior to carbonyl reduction, or on the N-unsubstituted acridan-9-carboxy

nucleus. For example, N-phenylacridan-9-carboxylic acid (preparation given) was condensed with 4-chlorothiophenol (CH<sub>3</sub>CN, CDI, 1 h) gave II in 55% after purification. A formulation of II with urea peroxide was treated with HRP solution produced I<sub>max</sub> = 1014 @ 60 min.

L13 ANSWER 18 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, Dppp  
 RL: CAT (Catalyst use); USES (Uses)  
 (ligand for catalyst stabilization; procedure for the racemization of  
 acylamino acids in the presence of a transition metal catalyst)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:691684 HCAPLUS  
 DOCUMENT NUMBER: 135:242494  
 TITLE: Procedure for the racemization of N-acylamino acids in  
 the presence of a transition metal catalyst  
 INVENTOR(S): Riermeier, Thomas; Beller, Matthias; Schichl, Daniel;  
 Hateley, Martin  
 PATENT ASSIGNEE(S): Aventis Research and Technologies GmbH and Co. KG,  
 Germany  
 SOURCE: Ger. Offen., 6 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10013599	A1	20010920	DE 2000-10013599	20000318 <--
EP 1136466	A2	20010926	EP 2001-102629	20010207 <--
EP 1136466	A3	20030604		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 20010031890	A1	20011018	US 2001-803688	20010312 <--
US 6437175	B2	20020820		
JP 2001302604	A	20011031	JP 2001-77810	20010319 <--
PRIORITY APPLN. INFO.:			DE 2000-10013599	A 20000318 <--
OTHER SOURCE(S): MARPAT 135:242494				

AB RCH(NR1COR2)CO2H [I; R, R1, R2 = H, alkenyl, alkynyl, (substituted) alkyl, aryl, heteroaryl], were racemized by reaction of I (≥0% ee) in a solvent in the presence of a transition metal salt, a transition metal complex, a transition metal complex salt, or a mixture thereof containing ≥1 element of Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, and Pt. Thus, a mixture of (S)-N-acetylproline, tricyclohexylphosphine, and [Rh(COD)Cl]<sub>2</sub> (COD = 1,5-cyclooctadiene) in MeCN was heated at 60° for 48 h to give N-acetylproline with 1% ee.

L13 ANSWER 19 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; preparation of (formylethyl)phosphine oxides or  
 (formylethyl)phosphonates by hydroformylation)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:683999 HCAPLUS  
DOCUMENT NUMBER: 135:242341  
TITLE: Preparation of (formylethyl)phosphine oxides and  
(formylethyl)phosphonates  
INVENTOR(S): Mizushima, Eiichiro; Han, Liu Piao; Hayashi, Teruyuki;  
Tanaka, Masato  
PATENT ASSIGNEE(S): Ministry of Economy, Trade and Industry; National  
Industrial Research Institute, Japan; National  
Institute of Advanced Industrial Science and  
Technology  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001253890	A	20010918	JP 2000-68586	20000313 <--
JP 3610371	B2	20050112		

PRIORITY APPLN. INFO.: JP 2000-68586 20000313 <--  
OTHER SOURCE(S): CASREACT 135:242341; MARPAT 135:242341  
AB R1R2P(O)CX1R3CH2X2 or (R4O)(R5O)P(O)CX1R6CH2X2 [R1, R2, R4, R5 = aromatic or  
aliphatic group; R3, R6 = H, aromatic or aliphatic group; (X1,X2) = (H,CHO),  
(CHO,H)], useful as intermediates for chiral catalyst ligands, fire  
retardants, actinide extractants, etc., are prepared by reaction of  
R1R2P(O)CR3:CH2 or (R4O)(R5O)P(O)CR6:CH2 (R1-R6 = same as above) with CO  
and H in the presence of transition metal catalysts. Thus, Ph<sub>2</sub>P(O)CPh:CH<sub>2</sub>  
was hydroformylated in PhMe in the presence of di-μ-  
chlorotetracarbonyldirrhodium and PPh<sub>3</sub> at 120° for 18 h to give 86%  
Ph<sub>2</sub>P(O)CHPhCH<sub>2</sub>CHO.  
L13 ANSWER 20 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: CAT (Catalyst use); USES (Uses)  
(carbonylation catalyst composition and method for producing diaryl  
carbonates from phenols using bisphosphines)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:427399 HCAPLUS  
DOCUMENT NUMBER: 135:33730  
TITLE: Carbonylation catalyst composition and method for  
producing diaryl carbonates from phenols using  
bisphosphines  
INVENTOR(S): Soloveichik, Grigorii Lev; Patel, Ben Purushatom;  
Ofori, John Yaw; Shalyaev, Kirill Vladimirovich  
PATENT ASSIGNEE(S): General Electric Company, USA  
SOURCE: U.S., 7 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6245929	B1	20010612	US 1999-466031	19991220 <--
WO 2001046119	A1	20010628	WO 2000-US32868	20001204 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1242358	A1	20020925	EP 2000-980954	20001204 <--
EP 1242358	B1	20040519		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003518083	T	20030603	JP 2001-547031	20001204 <--
AT 267160	T	20040615	AT 2000-980954	20001204 <--
US 20010014753	A1	20010816	US 2001-813394	20010321 <--
US 6407027	B2	20020618		

PRIORITY APPLN. INFO.: US 1999-466031 A 19991220 <--  
WO 2000-US32868 W 20001204 <--

OTHER SOURCE(S): MARPAT 135:33730

AB Hydroxyarom. compds. such as phenol are carbonylated with oxygen and carbon monoxide into di-Ph carbonate in the presence of a catalyst system comprising: a Group VIII metal, preferably palladium; at least one bromide or chloride salt, preferably sodium bromide or a tetraalkylammonium bromide; at least one organic bisphosphine such as 1,3-bis(diphenylphosphino)propane or 1,4-bis(diphenylphosphino)butane; and a compound of a metal other than a Group VIII metal having an atomic number of at least 44, preferably a lead bromophenoxide. There may also be present a polar organic liquid as a cosolvent.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 21 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(preparation of organohalosilanes by direct reaction of metallic silicon with organic halides in presence of poly(organo)phosphine promoters and copper-based catalysts)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:408073 HCAPLUS

DOCUMENT NUMBER: 135:5702

TITLE: Preparation of organohalosilanes from metallic silicon, an organohalide, a copper catalyst and a poly(organo)phosphine promoter

INVENTOR(S): Ueno, Susumu; Shinohara, Toshio; Aramata, Mikio; Tanifuji, Yoichi; Inukai, Tetsuya; Fujioka, Kazutoshi

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S., 10 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6242629	B1	20010605	US 2000-657282	20000907 <--
JP 2001335587	A	20011204	JP 2000-153005	20000524 <--
JP 3379513	B2	20030224		

PRIORITY APPLN. INFO.: JP 2000-153005 A 20000524 <--

OTHER SOURCE(S): MARPAT 135:5702

AB Organohalosilanes  $R_nH_mSiX_4-n-m$  ( $R = C1-6$  monovalent hydrocarbon group;  $X =$  halogen;  $n, m = 0-3, n + m = 1-3$ ) are prepared by charging a reactor with a contact mass containing metallic Si powder and a Cu catalyst, and introducing an organohalide-containing gas, preferably MeCl or PhCl, into the reactor to effect the direct reaction, with  $1-5 \times 10^4$  parts of a poly(organo)phosphine compound  $R_1R_2P[(Y)aPR_3]bR_4$  ( $R_1, R_2, R_3, R_4 =$  monovalent hydrocarbon group,  $Y =$  divalent organic group,  $a = 0-1, b \geq 1$ ) added to the contact mass per  $1 \times 10^6$  parts by weight of Si in order to produce organohalosilanes at a significantly improved production rate without reducing the selectivity of useful silane. In examples given, production rates of 359-484 g/h were achieved in presence of poly(organo)phosphine promoters such as DPPM, DPPE, DPPP, etc., as opposed to rates of 138-288 g/h when no such promoters were used; the useful silane content produced was relatively constant at 85.7-89.8% for either system.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 22 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(phosphine chelating ligand; preparation of tetracyclic intermediates useful in the synthesis of anthracyclines)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$Ph_2P-(CH_2)_3-PPh_2$

ACCESSION NUMBER: 2001:265367 HCAPLUS

DOCUMENT NUMBER: 134:280645

TITLE: Process for preparing tetracyclic intermediates useful in the synthesis of anthracyclines

INVENTOR(S): Chen, Qing Ping; Woods, Ross Alexander; Elliott, Robyn Louise

PATENT ASSIGNEE(S): Institute of Drug Technology Australia Limited, Australia

SOURCE: PCT Int. Appl., 41 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

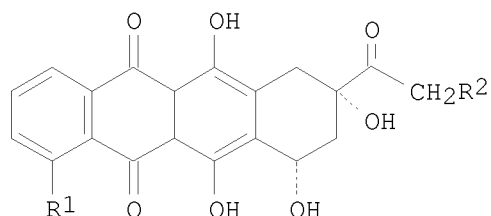
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001025179	A1	20010412	WO 2000-AU1198	20000929 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,			

YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 PRIORITY APPLN. INFO.: AU 1999-3197 A 19991001 <--  
 OTHER SOURCE(S): MARPAT 134:280645  
 GI



I

AB Tetracyclic derivs. such as I [R1 = X-(C=X)-Y; X = O, S; Y = NR1R2, OR3, R4; R1, R2 = alkyl, aryl, aralkyl; R3 = alkyl, aryl, aralkyl; R4 = alkyl, alkenyl, alkynyl, aryl, aralkyl; R = H, protected OH], useful in the synthesis of anthracyclines were prepared by rearrangement of thiono ester derivs. followed by reduction

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 23 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(bisphosphine-containing carbonylation catalyst compns. for producing diaryl carbonates from the reaction of carbon monoxide and oxygen with hydroxyarom. compds.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:255950 HCAPLUS

DOCUMENT NUMBER: 134:281251

TITLE: Bisphosphine-containing carbonylation catalyst compositions for producing diaryl carbonates from the reaction of carbon monoxide and oxygen with hydroxyaromatic compounds

INVENTOR(S): Patel, Ben Purushotam; Soloveichik, Grigorii Lev; Ofori, John Yaw

PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6215015	B1	20010410	US 2000-550202	20000417 <--
WO 2001079149	A2	20011025	WO 2001-US40036	20010206 <--
WO 2001079149	A3	20020328		
W: CN, JP, SG				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1286948	A2	20030305	EP 2001-920961	20010206 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 20010041807	A1	20011115	US 2001-780701	20010212 <--
US 6617279	B2	20030909		
PRIORITY APPLN. INFO.:			US 2000-550202	A 20000417 <--
			WO 2001-US40036	W 20010206 <--

OTHER SOURCE(S): MARPAT 134:281251

AB Hydroxyarom. compds. (e.g., phenol) are carbonylated with oxygen and carbon monoxide into diaryl carbonates (e.g., di-Ph carbonate) in the presence of a catalyst system comprising a Group VIIIIB metal having an atomic number of  $\geq 44$  (e.g., palladium), an iodide salt (e.g., sodium iodide), and at least one organic bisphosphine [e.g., 1,4-bis(diphenylphosphino)butane].

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 24 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(improved preparation of alkyl[chloroalkoxy(alkylsulfonyl)benzoyl]hydroxypyrazole herbicides)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:241790 HCAPLUS

DOCUMENT NUMBER: 134:266305

TITLE: Process for preparing 1-alkyl-4-(2-chloro-3-alkoxy-4-alkylsulfonylbenzoyl)-5-hydroxypyrazole and related compounds

INVENTOR(S): Siddall, Thomas L.; Krumel, Karl L.; Emonds, Mark V. M.; Schomaker, Jennifer M.; Zettler, Mark W.

PATENT ASSIGNEE(S): Dow Agrosciences LLC, USA

SOURCE: U.S., 10 pp., Cont.-in-part of U.S. 6,015,911.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

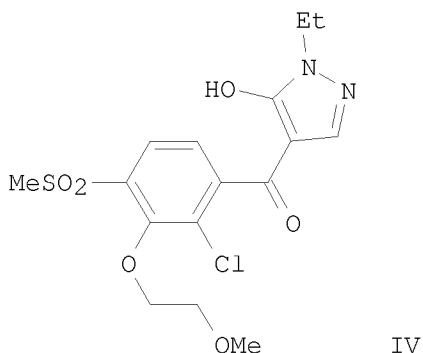
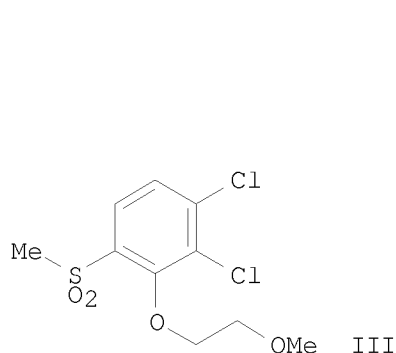
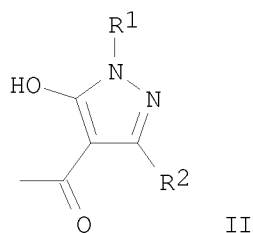
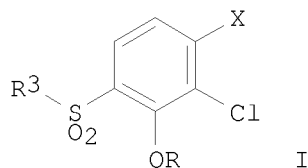
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6211403	B1	20010403	US 1999-440609	19991115 <--
US 6015911	A	20000118	US 1998-47173	19980324 <--
PRIORITY APPLN. INFO.:			US 1997-42349P	P 19970324 <--
			US 1998-47173	A2 19980324 <--

OTHER SOURCE(S): CASREACT 134:266305; MARPAT 134:266305

GI



AB Two reactions which are useful in the preparation of pyrazole-based herbicides are improved. In the first process, herbicidal 1-alkyl-4-[2-chloro-3-alkoxy-4-(alkylsulfonyl)benzoyl]-5-hydroxypyrazole compds., as well as intermediate 1-halo-2-chloro-3-alkoxy-4-(alkylsulfonyl)benzene compds., and intermediate 2-chloro-3-alkoxy-4-(alkylsulfonyl)benzoic acid compds., were prepared in good yield via an improved etherification reaction. Specifically, alkoxyated compds. I [X = Cl, Br, CO<sub>2</sub>H, pyrazolylcarbonyl group II; R = alkyl, alkoxyalkyl, alkylthioalkyl, (hetero)cycloaliph.-alkyl or (hetero)cycloaliph. where hetero is optional O or S; R<sub>1</sub>, R<sub>3</sub> = alkyl; R<sub>2</sub> = H, alkyl] are prepared by reaction of corresponding 2,3-dichloro compds. with an alkali metal alkoxide derivative. In the second process, 1-halo-2-chloro-3-alkoxy-4-(alkylsulfonyl)benzene and 1-halo-2,3-dichloro-4-(alkylsulfonyl)benzene compds. were converted to compds. having carboxy, alkoxy carbonyl, or 1-alkyl-5-hydroxypyrazole-4-carbonyl substituents in place of the 1-halo substituent by reaction with CO and either water, an alc., or a 1-alkyl-5-hydroxypyrazole compound, resp., in the presence of a palladium II salt: trihydrocarbylphosphine complex type catalyst. As an example of the first process, 2-methoxyethanol was converted to the Na salt with NaH in anhydrous THF, and this reacted with 1,2,3-trichloro-4-(methylsulfonyl)benzene at 25° to give the intermediate 1,2-dichloro-3-(2-methoxyethoxy)-4-(methylsulfonyl)benzene (III) in 100% yield. In an example of the second process, III and 1-ethyl-5-hydroxypyrazole were carbonylated with 175-200 psi CO at 100-105° in dioxane, in the presence of Na<sub>2</sub>CO<sub>3</sub>, Pd(OAc)<sub>2</sub>, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>4</sub>PPh<sub>2</sub>, Bu<sub>4</sub>N<sup>+</sup>Br<sup>-</sup>, and hydroquinone, to give 59% target herbicide IV.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 25 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

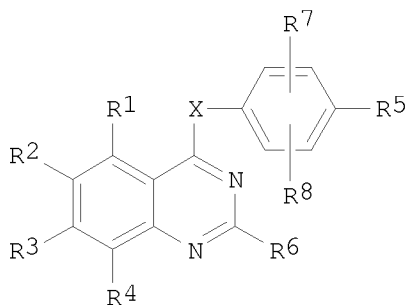
(intermediate; preparation of 4-substituted quinazoline aurora 2 kinase

inhibitors for treatment of cancer and other proliferative diseases)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

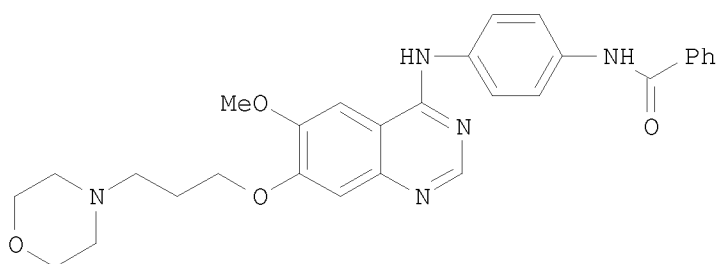
Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:228866 HCAPLUS  
 DOCUMENT NUMBER: 134:266317  
 TITLE: Preparation of quinazolines as aurora 2 kinase inhibitors  
 INVENTOR(S): Mortlock, Andrew Austen; Keen, Nicholas John; Jung, Frederic Henri; Brewster, Andrew George  
 PATENT ASSIGNEE(S): Astrazeneca AB, Swed.; Astrazeneca UK Limited  
 SOURCE: PCT Int. Appl., 306 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001021596	A1	20010329	WO 2000-GB3580	20000918 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2384291	A1	20010329	CA 2000-2384291	20000918 <--
BR 2000014116	A	20020521	BR 2000-14116	20000918 <--
EP 1218354	A1	20020703	EP 2000-960840	20000918 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003509499	T	20030311	JP 2001-524975	20000918 <--
EE 200200119	A	20030415	EE 2002-119	20000918 <--
HU 2003000059	A2	20030728	HU 2003-59	20000918 <--
HU 2003000059	A3	20030828		
BG 106492	A	20030131	BG 2002-106492	20020307 <--
IN 2002MN00293	A	20050318	IN 2002-MN293	20020308 <--
ZA 2002002234	A	20030619	ZA 2002-2234	20020319 <--
NO 2002001399	A	20020430	NO 2002-1399	20020320 <--
PRIORITY APPLN. INFO.:			GB 1999-22154	A 19990921 <--
			GB 1999-22170	A 19990921 <--
			WO 2000-GB3580	W 20000918 <--
			WO 2000-GB9100	A 20000918 <--
OTHER SOURCE(S):			MARPAT 134:266317	
GI				



I



II

AB Title compds. (I) [wherein X = O, S, SO, SO<sub>2</sub>, NH, or NR<sub>12</sub>; R<sub>12</sub> = H or alkyl; R<sub>1</sub>-R<sub>4</sub> = independently halo, CN, NO<sub>2</sub>, alkylsulfanyl, N(OH)R<sub>13</sub>, or R<sub>15</sub>X<sub>1</sub>; R<sub>13</sub> = H or alkyl; X<sub>1</sub> = a direct bond, O, CH<sub>2</sub>, OC(O), CO, CO<sub>2</sub>, S, SO, SO<sub>2</sub>, or (un)substituted NHCO, CONH, SO<sub>2</sub>NH, NHSO<sub>2</sub>, or NH; R<sub>15</sub> = H or (un)substituted hydrocarbyl, heterocyclyl, or alkoxy; R<sub>5</sub> = NHCOR<sub>9</sub>, NHCOR<sub>9</sub>, NHSO<sub>2</sub>R<sub>9</sub>, COR<sub>9</sub>, CO<sub>2</sub>R<sub>9</sub>, SOR<sub>9</sub>, SO<sub>2</sub>OR<sub>9</sub>, CONR<sub>10</sub>R<sub>11</sub>, SONR<sub>10</sub>R<sub>11</sub>, or SO<sub>2</sub>NR<sub>10</sub>R<sub>11</sub>; R<sub>9</sub>-R<sub>11</sub> = independently H or (un)substituted hydrocarbyl or heterocyclyl; or R<sub>10</sub> and R<sub>11</sub> together with the N to which they are attached = (un)substituted heterocyclyl; R<sub>6</sub> = H or (un)substituted hydrocarbyl or heterocyclyl; R<sub>7</sub> and R<sub>8</sub> = independently H, halo, alkyl, (di)alkoxy(methyl), alkanoyl, CF<sub>3</sub>, CN, NHY<sub>2</sub>, alkenyl, alkynyl, or (un)substituted Ph, PhCH<sub>2</sub>, or heterocyclyl; or a salt, ester, or amide thereof] were prepared as aurora 2 kinase inhibitors for the treatment of proliferative diseases, such as cancer. For example, a 7-step sequence involving (1) alkylation of morpholine with 1-bromo-3-chloropropane (49%), (2) addition of Et vanillate to yield Et 3-methoxy-4-(3-morpholinopropoxy)benzoate (100%), (3) nitration (86%), (4) reduction to the amine using 10% Pd/C (100%), (5) cycloaddn. with formamide to form the quinazoline(68%), (6) chlorination to give 4-chloro-6-methoxy-7-(3-morpholinopropoxy)quinazoline (60%), and (7) amination with N-benzoyl-4-aminoaniline (58%) yielded II. The latter inhibited the serine/threonine kinase activity of aurora 2 kinase by 50% at a concentration of 0.0193  $\mu$ M. In addition, II gave 50% inhibition of MCF-7 cell proliferation at 1.06  $\mu$ M and reduced BrdU incorporation into cellular DNA by 50% at 0.159-0.209  $\mu$ M.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 26 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: DEV (Device component use); USES (Uses)

(electrolyte composition for photosensitized solar cell and method of fabricating photosensitized solar cell)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:225352 HCAPLUS  
DOCUMENT NUMBER: 134:240135  
TITLE: Electrolyte composition and photosensitized solar cell  
using the electrolyte composition  
INVENTOR(S): Mikoshiba, Satoshi; Sumino, Hiroyasu; Yonetsu, Maki;  
Hayase, Shuji  
PATENT ASSIGNEE(S): Kabushiki Kaisha Toshiba, Japan  
SOURCE: Eur. Pat. Appl., 32 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 1087412	A2	20010328	EP 2000-308307	20000922 <--
EP 1087412	A3	20031210		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 2000061246	A	20010329	AU 2000-61246	20000922 <--
AU 739381	B2	20011011		
JP 2001160427	A	20010612	JP 2000-288872	20000922 <--
JP 3946947	B2	20070718		
US 6384321	B1	20020507	US 2000-667562	20000922 <--
PRIORITY APPLN. INFO.:			JP 1999-269762	A 19990924 <--
OTHER SOURCE(S):	MARPAT 134:240135			

AB The title electrolyte contains  $\geq 1$  kind of an imidazolium salt selected from the group consisting of: 1-methyl-3-Pr imidazolium iodide, 1-methyl-3-iso-Pr imidazolium iodide, 1-methyl-3-Bu imidazolium iodide, 1-methyl-3-iso-Bu imidazolium iodide, and 1-methyl-3-sec-butylimidazolium iodide, a halogen-containing compound dissolved in the electrolyte; and containing  $\geq 1$  element selected from the group consisting of N, P, and S, the compound being capable of forming an onium salt together with the halogen-containing compound The electrolyte is characterized in that the compound having the  $\geq 1$  element has  $\geq 1$  kind of atomic group selected from the group consisting of primary amino group, secondary amino group, tertiary amino group, and -PH<sub>2</sub> group.

L13 ANSWER 27 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: CAT (Catalyst use); USES (Uses)  
(cyclocondensation reaction catalysts with palladium compds. for the conversion of 1,2-bis(halomethyl)benzenes with alcs. and carbon monoxide into isochroman-3-ones)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:225291 HCAPLUS  
DOCUMENT NUMBER: 134:252262  
TITLE: Process, palladium catalysts and dipolar aprotic

solvent systems for the preparation of  
isochroman-3-ones by the reaction of  
1,2-bis(halomethyl)benzenes with alcohols and carbon  
monoxide

INVENTOR(S): Geissler, Holger; Pfirrmann, Ralf  
PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
SOURCE: Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

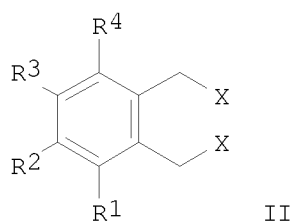
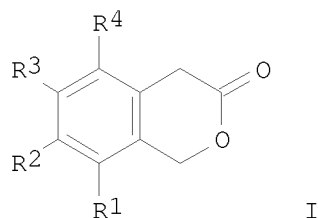
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1086949	A2	20010328	EP 2000-119865	20000913 <--
EP 1086949	A3	20010425		
EP 1086949	B1	20030219		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19945561	A1	20010329	DE 1999-19945561	19990923 <--
CA 2320496	A1	20010323	CA 2000-2320496	20000922 <--
JP 2001139570	A	20010522	JP 2000-289949	20000925 <--
US 6348603	B1	20020219	US 2000-668915	20000925 <--
PRIORITY APPLN. INFO.:			DE 1999-19945561	A 19990923 <--
OTHER SOURCE(S):	CASREACT 134:252262; MARPAT 134:252262			
GI				



AB Isochroman-3-ones (I; R1-R4 = H, F, CN, CF3, alkyl, alkoxy, aryl, aryloxy, heteroaryl) (e.g., isochroman-3-one) are prepared in high yield and selectivity by the reaction of carbon monoxide with 1,2-bis(halomethyl)benzenes (II; X = Cl, Br, I) [e.g., 1,2-

bis(chloromethyl)benzene] with alcs. (R5)(R6)(R7)COH (R5-R7 = alkyl, CO2H, H3CCOCH2, arylmethyl) (e.g., tert-butanol) in the presence of a palladium catalyst (e.g., palladium dichloride) at 20-200°/0.1-50 MPa in the presence of a dipolar aprotic solvent system and optionally in the presence of water.

L13 ANSWER 28 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (lubricants containing oligomeric polyketones)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:168087 HCAPLUS  
 DOCUMENT NUMBER: 134:210386  
 TITLE: Lubricants containing oligomeric polyketones  
 INVENTOR(S): Boyde, Stephen; Cameron, Paul Alexander; Eastham, Graham Ronald; Tooze, Robert Paul  
 PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001016260	A1	20010308	WO 2000-GB3235	20000822 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000067103	A	20010326	AU 2000-67103	20000822 <--
PRIORITY APPLN. INFO.:			GB 1999-20516	A 19990901 <--
			WO 2000-GB3235	W 20000822 <--

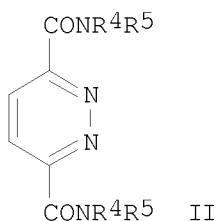
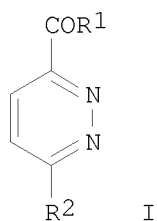
OTHER SOURCE(S): MARPAT 134:210386  
 AB A lubricant composition comprising an oligomeric ketone which is a fluid and which is obtainable by reacting an alkene containing from 4 to 20 carbon atoms with carbon monoxide in the presence of a catalyst which is obtainable by combining a transition metal or a compound thereof and a bidentate ligand.  
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 29 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of pyridazinecarboxylates from chloropyridazines, carbon monoxide, and alcs. or amines using palladium phosphine catalysts)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:78367 HCAPLUS  
DOCUMENT NUMBER: 134:131545  
TITLE: preparation of pyridazinecarboxylates from  
chloropyridazines, carbon monoxide, and alcohols or  
amines using palladium phosphine catalysts.  
INVENTOR(S): Bessard, Yves; Crettaz, Roger; Eggel, Michael  
PATENT ASSIGNEE(S): Lonza A.-G., Switz.  
SOURCE: PCT Int. Appl., 29 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001007416	A1	20010201	WO 2000-EP7198	20000726 <--
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRIORITY APPLN. INFO.:			EP 1999-114801	A 19990728 <--
			EP 1999-114966	A 19990730 <--
OTHER SOURCE(S):		CASREACT 134:131545; MARPAT 134:131545		
GI				



AB Title compds. [I, II; R<sub>1</sub> = OR<sub>3</sub>, NR<sub>4</sub>R<sub>5</sub>; R<sub>2</sub> = H, Cl, OR<sub>6</sub>, NR<sub>7</sub>R<sub>8</sub>; R<sub>3</sub> = alkyl, cycloalkyl, aralkyl; R<sub>4</sub> = alkyl, cycloalkyl, (substituted) aryl, aralkyl; R<sub>5</sub> = H, alkyl, cycloalkyl, (substituted) aryl, aralkyl; R<sub>6</sub> = alkyl, cycloalkyl, aralkyl, (substituted) aryl, heteroaryl; R<sub>7</sub>, R<sub>8</sub> = alkyl, cycloalkyl, aralkyl; R<sub>7</sub>R<sub>8</sub>N = saturated or aromatic heterocyclyl], were prepared by treatment of 3-chloropyridazines or 3,6-dichloropyridazine with CO and alcs. or amines in the presence of Pd phosphine complexes and bases. Thus, an autoclave was charged with EtOH, NaOAc, 3-chloropyridazine (preparation given), 1,1'-bis(diphenylphosphino)ferrocene, and Pd(OAc)<sub>2</sub>. The mixture was pressured to 15 bar with CO and stirred 2 h at 100° to give 59.3% Et pyridazine-3-carboxylate.

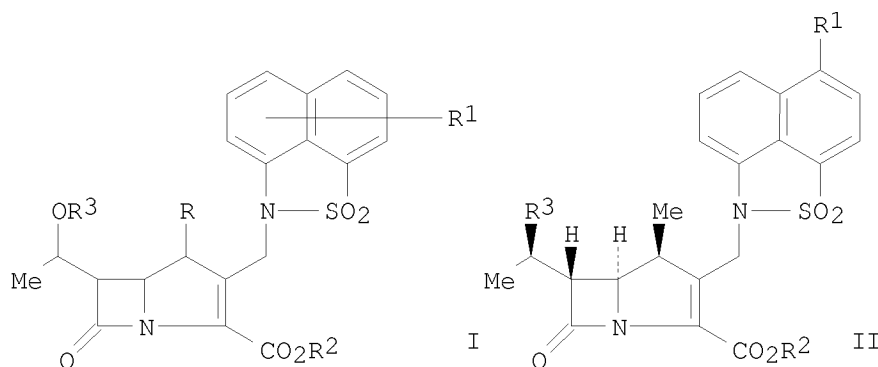
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 30 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, DPPP  
RL: CAT (Catalyst use); USES (Uses)  
(process for the synthesis of naphthosultam carbapenems)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2001:12457 HCAPLUS  
DOCUMENT NUMBER: 134:71433  
TITLE: Process for the synthesis of naphthosultam carbapenems  
INVENTOR(S): Grabowski, Edward J. J.; Chung, John Y. L.  
PATENT ASSIGNEE(S): Merck & Co., Inc., USA  
SOURCE: PCT Int. Appl., 37 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000624	A1	20010104	WO 2000-US16993	20000621 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 1999-141104P	P 19990625 <--
			US 1999-146249P	P 19990729 <--
OTHER SOURCE(S):		CASREACT 134:71433; MARPAT 134:71433		
GI				



AB A process for the synthesis of naphthosultam carbapenems, such as I [R = H, Me; R<sub>1</sub> = H, OH, halogen, protected hydroxy; R<sub>2</sub> = H, carboxy protecting group, such as CHPh<sub>2</sub>; R<sub>3</sub> = H, hydroxy protecting group], was described. Thus, naphthosultam carbapenem II [R<sub>1</sub> = (CH<sub>2</sub>)<sub>2</sub>OH, R<sub>2</sub> = 4-nitrobenzyl, R<sub>3</sub> = SiMe<sub>2</sub>CMe<sub>3</sub>] was prepared in a 4 step synthetic sequence starting from (γR, 2R, 3S)-α-diazo-3-[(1R)-1-[[[(1, 1-dimethylethyl)dimethylsilyl]oxy]ethyl]-γ-methyl-β, 4-dioxo-2-azetidinebutanoic acid (4-nitrophenyl)methyl ester and 4-(2-hydroxyethyl)-1, 8-naphthosultam.

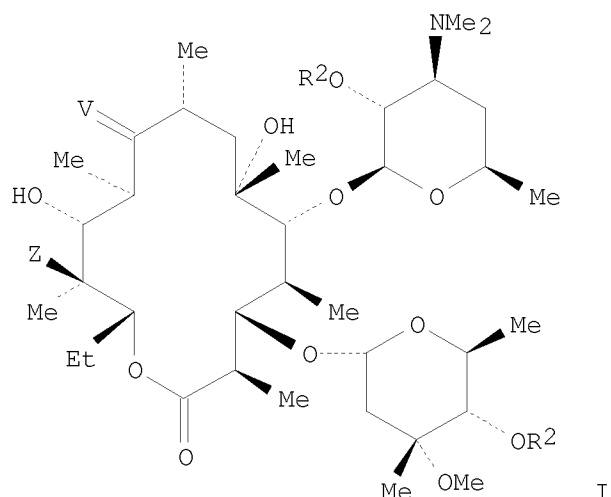
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 31 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for preparing 6-O-substituted erythromycin derivs. using  
 palladium-catalyzed alkylation with alkenylcarbonate reagents)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:911264 HCAPLUS  
 DOCUMENT NUMBER: 134:56914  
 TITLE: Process for preparing 6-O-substituted erythromycin  
 derivatives using palladium-catalyzed alkylation with  
 alkenylcarbonate reagents  
 INVENTOR(S): Stoner, Eric J.; Peterson, Matthew J.; Ku, Yi-Yin;  
 Cink, Russell D.; Cooper, Arthur J.; Deshpande,  
 Mahendra N.; Grieme, Tim; Haight, Anthony R.; Hill,  
 David R.; Hsu, Margaret Chi-Ping; King, Steven A.;  
 Leanna, Marvin R.; Lee, Elaine C.; McLaughlin, Maureen  
 A.; Morton, Howard E.; Napier, James J.; Plata, Daniel  
 J.; Raje, Prasad S.; Rasmussen, Michael; Riley, David;  
 Tien, Jien-Heh J.; Wittenberger, Steven J.  
 PATENT ASSIGNEE(S): Abbott Laboratories, USA  
 SOURCE: PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000078773	A2	20001228	WO 2000-US16579	20000615 <--
WO 2000078773	A3	20010222		
W: AU, CA, CN, IL, IN, JP, KR, MX, SG				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6437106	B1	20020820	US 2000-518281	20000303 <--
CA 2375364	A1	20001228	CA 2000-2375364	20000615 <--
EP 1272500	A2	20030108	EP 2000-942860	20000615 <--
EP 1272500	B1	20050504		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AU 779219	B2	20050113	AU 2000-57429	20000615 <--
AT 294809	T	20050515	AT 2000-942860	20000615 <--
PT 1272500	T	20050930	PT 2000-942860	20000615 <--
ES 2241619	T3	20051101	ES 2000-942860	20000615 <--
MX 2001PA13396	A	20020730	MX 2001-PA13396	20011219 <--
IN 2001MN01610	A	20070907	IN 2001-MN1610	20011219 <--
HK 1053659	A1	20060224	HK 2003-104301	20030616 <--
PRIORITY APPLN. INFO.:			US 1999-140968P	P 19990624 <--
			WO 2000-US16579	W 20000615 <--
OTHER SOURCE(S):			CASREACT 134:56914; MARPAT 134:56914	
GI				



AB In one aspect, the invention relates to a process for preparing 6-O-substituted erythromycin derivs. I wherein R<sub>2</sub> is independently H, hydroxyl protecting group; V is O, substituted oxime, substituted diazo; Z is OH, protected hydroxyl group, comprising reacting 2'-substituted and optionally 4''-substituted 9-oxime erythromycin derivs. with an alkylating agent R<sub>2</sub>C:CR<sub>2</sub>COXR<sub>1</sub> wherein R is independently selected from the group consisting of: hydrogen, an alkyl group of one to ten carbon atoms, halogen, aryl, substituted aryl, heteroaryl and substituted heteroaryl at each occurrence; R<sub>1</sub> is an alkyl group of one to ten carbon atoms, and X is O or NR', wherein R' is alkyl or aryl, or R<sub>1</sub> and R' taken together form an aromatic or non-aromatic ring; in the presence of palladium catalyst and a phosphine. Thus, 2',4''-O-bis(benzoyl)-6-O-[1-(3-quinolyl)-2-propen-yl]erythromycin A 9-[(O-benzoyl)oxime] was prepared in 95 % yield using 1-(3-quinolyl)-2-propen-1-ol t-Bu carbonate in presence of Pd(OAc)<sub>2</sub> and 1,4-bis(diphenylphosphine)butane.

L13 ANSWER 32 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: RCT (Reactant); RACT (Reactant or reagent)

(one-step preparation of benzoic acids and esters thereof by carboxylation of aryl halides with carbon monoxide and hydroxy compds. in presence of palladium-phosphine complex)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:865357 HCAPLUS

DOCUMENT NUMBER: 134:41919

TITLE: Method for preparation of benzoic acids and esters thereof

INVENTOR(S): Koide, Makoto; Ishida, Michio; Naridzuka, Satoshi; Morino, Yuzuru; Murata, Masaharu; Kume, Koji

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000344709	A	20001212	JP 1999-157796	19990604 <--

PRIORITY APPLN. INFO.: JP 1999-157796 19990604 <--

OTHER SOURCE(S): CASREACT 134:41919; MARPAT 134:41919

AB A method for preparing the title compds. of formula  $\text{ArCO}_2\text{R}_2$  [I; Ar = (un)substituted aromatic group;  $\text{R}_2 = \text{H}$ , C1-10 alkyl] involves the following steps: (1) reaction of aromatic compds. of formula  $\text{Ar-X}$  [II; Ar = same as above; X = F, Cl, iodo,  $\text{OSO}_2\text{CF}_3$ , C1-4 alkylsulfonyloxy, arylsulfonyloxy] with CO and hydroxy compds. of formula  $\text{R}_2\text{OH}$  (III;  $\text{R}_2 =$  same as above) in the presence of a base and a catalyst consisting of Pd and phosphine; (2) separation of benzoic acids and esters thereof I from the reaction mixture obtained in step 1; and (3) addition of aromatic compds. II, hydroxy compds. III, a base, and CO to the remaining reaction system from which benzoic acids and esters thereof I have been separated in step 2 and reaction of the resulting mixture Benzoic acids or esters thereof, which are useful as intermediates for drugs, agrochems., and various functional materials, are prepared in one step from aromatic halides at low cost. Thus, 200 g 3,5-bis(trifluoromethyl)bromobenzene, 145 g Et<sub>3</sub>N, and 100 mL THF were added to an stainless steel autoclave and mixed, followed by adding 1.79 g [3,5-bis(trifluoromethyl)benzoato]3',5'-bis(trifluoromethyl)phenylbis(triphenylphosphine)palladium(II) (catalyst, preparation given) and 100 g H<sub>2</sub>O, the resulting mixture was purged with N three-times and then with CO three-times, pressurized with CO at 4 kg/cm<sup>2</sup> (initial pressure), heated to 100° followed by regulating the pressure at 8 kg/cm<sup>2</sup>, and allowed to react at 100-105° for 13 h to give, after workup, 129 g 3,5-bis(trifluoromethyl)benzoic acid.

L13 ANSWER 33 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of nitro-substituted aromatic carboxylic acid esters from nitro-substituted aryl halides, carbon monoxide, and an alc.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

ACCESSION NUMBER: 2000:742054 HCAPLUS

DOCUMENT NUMBER: 133:309757

TITLE: Preparation of nitro-substituted aromatic carboxylic acid esters from nitro-substituted aryl halides, carbon monoxide, and an alcohol.

INVENTOR(S): Boaz, Neil W.; Coleman, M. Todd; Hightower, Timothy R.

PATENT ASSIGNEE(S): Eastman Chemical Company, USA

SOURCE: PCT Int. Appl., 32 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2000061538	A1	20001019	WO 2000-US6645	20000315 <--

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,

MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
 SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 US 6337418 B1 20020108 US 1999-288642 19990409 <--  
 EP 1169295 A1 20020109 EP 2000-916323 20000315 <--  
 EP 1169295 B1 20040728  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO  
 US 20020040159 A1 20020404 US 2001-4413 20011206 <--  
 US 7094919 B2 20060822  
 PRIORITY APPLN. INFO.: US 1999-288642 A 19990409 <--  
 WO 2000-US6645 W 20000315 <--

OTHER SOURCE(S): CASREACT 133:309757; MARPAT 133:309757

AB Nitro-substituted aromatic carboxylic acid esters were prepared by reaction of nitro-substituted aryl halides with CO and an alc. in the presence of a metal catalyst and a proton acceptor in the absence of H<sub>2</sub>O and O<sub>2</sub>. Thus, dichlorobis(triphenylphosphine)palladium, 4-bromo-3-nitrobenzotrifluoride, and Et<sub>3</sub>N in MeOH in MeOH were heated at 60° under 1 atmospheric CO to give 98% Me 2-nitro-4-trifluoromethylbenzoate. The latter was converted to 1-(2-methylthio-4-trifluoromethylphenyl)-3-cyclopropyl-1,3-propanedione.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 34 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; catalysts for alternating polymerization of olefins with carbon monoxide in hot-melt adhesive production)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:741053 HCAPLUS

DOCUMENT NUMBER: 133:310666

TITLE: Hot melt adhesives produced from linear alternating polyketones

INVENTOR(S): Hefner, John Guinn; Robeson, Lloyd Mahlon

PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1045017	A1	20001018	EP 2000-107787	20000411 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6239250	B1	20010529	US 1999-293002	19990416 <--
CA 2304910	A1	20001016	CA 2000-2304910	20000410 <--
JP 2000319617	A	20001121	JP 2000-121093	20000417 <--
PRIORITY APPLN. INFO.:			US 1999-293002	A 19990416 <--
AB Olefin/CO linear alternating copolymers which are useful in hot-melt adhesive applications are disclosed. The linear alternating copolymers have m.p.s. ranging from 50 to 165° and exhibit a combination of				

properties which are desired for hot-melt adhesives. Single olefins or combinations of olefins ranging from ethylene to C12 olefins can be used to form the linear alternating copolymer. Examples of manufacture using prepared palladium complex catalysts were given.

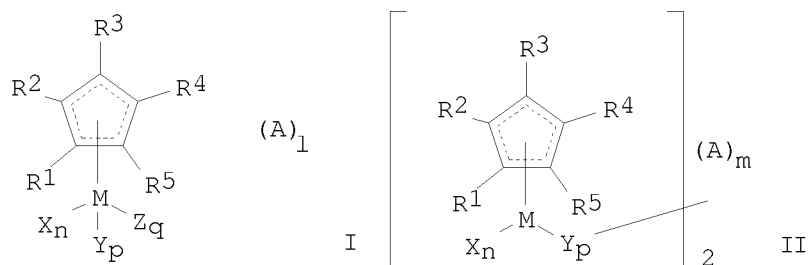
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 35 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in preparation of cyclopentadienyl transition metal catalysts for hydroformylation of epoxides)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:712988 HCAPLUS  
DOCUMENT NUMBER: 133:296200  
TITLE: Cyclopentadienyl transition metal catalysts in preparation of hydroxy aldehydes, hydroxy esters, or alkanediols from epoxides  
INVENTOR(S): Lee, Byeong-No; Yang, Duck Joo; Byun, Young-Hun  
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea  
SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000281695	A	20001010	JP 2000-65750	20000306 <--
JP 3482371	B2	20031222		
KR 2000059806	A	20001005	KR 1999-7676	19990309 <--
CN 1267569	A	20000927	CN 2000-104128	20000308 <--
EP 1122235	A2	20010808	EP 2000-303755	20000504 <--
EP 1122235	A3	20021211		
EP 1122235	B1	20040915		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 276227	T	20041015	AT 2000-303755	20000504 <--
ES 2226717	T3	20050401	ES 2000-303755	20000504 <--
KR 2001077977	A	20010820	KR 2001-1784	20010112 <--
PRIORITY APPLN. INFO.:			KR 1999-7676	A 19990309 <--
			KR 2000-5357	A 20000203 <--
OTHER SOURCE(S): CASREACT 133:296200; MARPAT 133:296200				
GI				



AB The catalysts comprise transition metal complexes I [M = Co, Rh, Ir; (A) = BF<sub>4</sub>-, PF<sub>6</sub>-, ClO<sub>4</sub>-, SO<sub>3</sub>CF<sub>3</sub>-, BR'<sub>4</sub>-, halo, CO<sub>3</sub>2-, SO<sub>4</sub>2-; R' = H, (substituted) alkyl; l = 0-2; R<sub>1</sub>-R<sub>5</sub> = H, (substituted) C<sub>1</sub>-20 hydrocarbyl, halo; X, Y, Z = CO, halo, OH, C<sub>1</sub>-10 hydrocarbyl, C<sub>1</sub>-10 alkoxy, C<sub>1</sub>-10 nitrile, C<sub>1</sub>-20 ketone, etc.; n, p, q = 0-3; n + p + q = 3], II (M, R<sub>1</sub>-R<sub>5</sub>, (A) = same as I; Xn' = CO, halo, OH, C<sub>1</sub>-10 alkoxy, C<sub>1</sub>-10 nitrile, etc.; Yp' = CO, halo, OH, C<sub>1</sub>-10 alkoxy; m = 0, 1, 2, 4), or their derivs. 3-Hydroxyaldehydes are prepared by hydroformylation of epoxides by 3/1-1/10 CO/H at 30-120° under 100-3000 psi in the presence of the catalysts and Co compds. at 1:1000-5:1 molar ratio in nonaq. solvents. Ethylene oxide was hydroformylated in aqueous MeOBu-t using Co<sub>2</sub>(CO)<sub>8</sub> and IrCp\*Cl<sub>2</sub>PPh<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub>IrCp\*Cl<sub>2</sub> (Cp\* = pentamethylcyclopentadienyl) at 80° under 450/1050 psi CO/H for 1 h to give 81.0% 3-hydroxypropanal. Preparation of 1,3-alkanediols by hydroesterification of epoxides using Co catalysts and their promoters followed by hydrogenation is also described.

L13 ANSWER 36 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(palladium catalyzed phosphination of triflated binaphthol in presence of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:705090 HCAPLUS

DOCUMENT NUMBER: 133:266977

TITLE: Phosphine derivative and polymer thereof and transition metal complex comprising the same

INVENTOR(S): Tamao, Kyoko; Sayo, Noboru

PATENT ASSIGNEE(S): Takasago International Corp., Japan

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

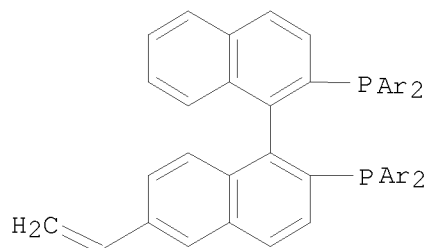
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1041077	A2	20001004	EP 2000-400848	20000328 <--
EP 1041077	A3	20020612		
EP 1041077	B1	20031105		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

JP 2000281691 A 20001010 JP 1999-88601 19990330 <--  
 US 6465594 B1 20021015 US 2000-539413 20000330 <--  
 PRIORITY APPLN. INFO.: JP 1999-88601 A 19990330 <--  
 OTHER SOURCE(S): CASREACT 133:266977; MARPAT 133:266977  
 GI



I

AB Disclosed are a phosphine derivative I (Ar = (un)substituted Ph, (un)substituted naphthyl), a transition metal complex comprising the phosphine derivative or a polymer thereof as a ligand, and a process for producing an optically active amino acid compound by asym. hydrogenation using the transition metal complex as a catalyst. Thus, I (Ar = Ph) was prepared in several steps starting from (R)-binaphthol, was copolymd. with styrene and divinylbenzene in a polyvinyl alc., chloroform, or a toluene solution. The polymer obtained above was reacted with di(1,5-cyclooctadiene)rhodium tetrafluoroborate to give a catalyst for asym. hydrogenation of Me (Z)- $\alpha$ -benzamidocinnamate.

L13 ANSWER 37 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (transition metal complex catalyst for carbonylation of epoxides)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:645633 HCAPLUS  
 DOCUMENT NUMBER: 133:239707  
 TITLE: Transition metal complex catalysts for carbonylation of epoxide derivatives  
 INVENTOR(S): Lee, Byeong-No; Yang, DuckJoo; Byun, Young-Hun  
 PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea  
 SOURCE: Eur. Pat. Appl., 28 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1034842	A2	20000913	EP 2000-103880	20000224 <--
EP 1034842	A3	20011114		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO  
 KR 2000059806 A 20001005 KR 1999-7676 19990309 <--  
 US 6348611 B1 20020219 US 1999-387713 19990825 <--  
 PRIORITY APPLN. INFO.: KR 1999-7676 A 19990309 <--  
 OTHER SOURCE(S): MARPAT 133:239707

AB A process for carbonylation of epoxide derivs. (e.g., ethylene oxide, propylene oxide) with superior reactivity, selectivity, and yield is provided. More specifically, a process for hydroformylation of an epoxide derivative uses a transition metal catalyst having a cyclopentadienyl radical, thereby improving the reactivity and selectivity. In hydroesterification of an epoxide derivative using a proper catalyst, the reaction temperature and pressure are adjusted within proper ranges under the presence of a cobalt catalyst, thereby improving the product selectivity and the yield.

L13 ANSWER 38 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of diols by hydroformylation of  $\alpha$ -hydroxydiolefins)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:622491 HCAPLUS  
 DOCUMENT NUMBER: 133:207587  
 TITLE: Preparation of diols by hydroformylation of  $\alpha$ -hydroxydiolefins.  
 INVENTOR(S): Wong, Pui-Kwan; Moxey, Andrew Allison  
 PATENT ASSIGNEE(S): Shell Oil Co., USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6114588	A	20000905	US 1998-96075	19980611 <--
PRIORITY APPLN. INFO.:			US 1997-49287P	P 19970611 <--
OTHER SOURCE(S): CASREACT 133:207587				

AB Dialcs. were prepared by (1) providing a feed stream comprising an  $\alpha$ -hydroxydiolefin; (2) reacting the feed stream with H<sub>2</sub>/CO in the presence of a catalyst system comprising a Co phosphine ligand complex under conditions effective to hydroformylate at least a portion of the diolefin in the feed stream; and (3) recovering the dialc. from the reacted feed stream. Thus, 2,7-octadien-1-ol, dicobalt octacarbonyl, tri-n-octylphosphine, and diglyme were autoclaved at 150° and 1000 psi syngas for 24 h to give 50.3% difunctional hydroformylation products and 39.5% reduction products. Reduction products included 1-octanol and octanal, and hydroformylation products included C<sub>9</sub> diols, dialdehyde, and hydroxyaldehydes.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 39 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4, (1,3-Bis(diphenylphosphino)propane)  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactant for preparation of platinum ethylenediamine diphosphine complex as

antitumor agent)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:542885 HCAPLUS  
DOCUMENT NUMBER: 133:129217  
TITLE: New anticancer platinum complex and production thereof  
INVENTOR(S): Noh, Young-soo; Jung, Ji-chang; Choe, Seung-ki  
PATENT ASSIGNEE(S): S. Korea  
SOURCE: Repub. Korea, No pp. given  
CODEN: KRXXFC  
DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 9708656	B1	19970528	KR 1993-21051	19931012 <--
PRIORITY APPLN. INFO.:			KR 1993-21051	19931012 <--
AB	PtCl <sub>2</sub> and DPPP (1,3-bis(diphenylphosphino)propane) reacted in H <sub>2</sub> O to give Pt(DPPP)Cl <sub>2</sub> . Pt(DPPP)Cl <sub>2</sub> and AgNO <sub>3</sub> were refluxed to give Pt(DPPP)(NO <sub>3</sub> ) <sub>2</sub> . Pt(DPPP)(NO <sub>3</sub> ) <sub>2</sub> and ethylenediamine reacted to give Pt(en)(DPPP)(NO <sub>3</sub> ) <sub>2</sub> .3H <sub>2</sub> O.			

L13 ANSWER 40 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant for preparation of platinum cyclohexanediamine diphosphine complex as antitumor agent)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:542879 HCAPLUS  
DOCUMENT NUMBER: 133:129216  
TITLE: New anticancer platinum complex and production thereof  
INVENTOR(S): Noh, Young-soo; Jung, Ji-chang; Choe, Seung-ki Q.  
PATENT ASSIGNEE(S): S. Korea  
SOURCE: Repub. Korea, No pp. given  
CODEN: KRXXFC  
DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 9708655	B1	19970528	KR 1993-21050	19931012 <--
PRIORITY APPLN. INFO.:			KR 1993-21050	19931012 <--
AB	K <sub>2</sub> PtCl <sub>4</sub> in H <sub>2</sub> O and cis-dach.2HCl (dach = 1,2-cyclohexanediamine) in. H <sub>2</sub> O reacted at room temperature for 1 h adjusting pH 6.5 by NaOH solution to give Pt(cis-dach)Cl <sub>2</sub> . Pt(cis-dach)Cl <sub>2</sub> and AgNO <sub>3</sub> in H <sub>2</sub> O reacted at room temperature for 24 h to give Pt(cis-1-dach)(NO <sub>3</sub> ) <sub>2</sub> . Pt(cis-dach)(NO <sub>3</sub> ) <sub>2</sub> reacted with 1,3-bis(diphenylphosphino)propane (L) in acetone to give 4.56 mg of			

Pt(cis-dach)L(NO3)2.H2O.

L13 ANSWER 41 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant for preparation of platinum cyclohexanediamine diphosphine complex  
as antitumor agent)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:542861 HCAPLUS  
DOCUMENT NUMBER: 133:129215  
TITLE: New anticancer platinum complex and production thereof  
INVENTOR(S): Noh, Young-soo; Jung, Ji-chang; Choe, Seung-ki  
PATENT ASSIGNEE(S): S. Korea  
SOURCE: Repub. Korea, No pp. given  
CODEN: KRXXFC  
DOCUMENT TYPE: Patent  
LANGUAGE: Korean  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KR 9708654	B1	19970528	KR 1993-21049	19931012 <--
PRIORITY APPLN. INFO.:			KR 1993-21049	19931012 <--
AB	K2PtCl <sub>4</sub> in H <sub>2</sub> O and trans-dach.2HCl (dach = 1,2-cyclohexanediamine) (L) in H <sub>2</sub> O reacted at room temperature for 1 h adjusting pH 6.5 by NaOH solution to give PtLCl <sub>2</sub> . PtLCl <sub>2</sub> and AgNO <sub>3</sub> in H <sub>2</sub> O reacted at room temperature for 24 h to give PtL(NO <sub>3</sub> ) <sub>2</sub> . PtL(NO <sub>3</sub> ) <sub>2</sub> in H <sub>2</sub> O and 1,3-bis(diphenylphosphino)propane (Q) in acetone reacted to give PtLQ(NO <sub>3</sub> ) <sub>2</sub> .H <sub>2</sub> O.			

L13 ANSWER 42 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of unsatd. phosphonic esters from acetylenes and secondary  
phosphite esters)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:539755 HCAPLUS  
DOCUMENT NUMBER: 133:120468  
TITLE: Preparation of unsaturated phosphonic esters from  
acetylenes and secondary phosphite esters  
INVENTOR(S): Tanaka, Masato; Han, Li Piao  
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan  
SOURCE: Jpn. Tokkyo Koho, 4 pp.  
CODEN: JTXXFF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 3041396	B1	20000515	JP 1999-60093	19990308 <--
JP 2000256381	A	20000919		
DE 19933601	A1	20000914	DE 1999-19933601	19990717 <--
US 6111127	A	20000829	US 1999-394626	19990913 <--
PRIORITY APPLN. INFO.:			JP 1999-59933	A 19990308 <--
			JP 1999-60093	A 19990308 <--

OTHER SOURCE(S): CASREACT 133:120468; MARPAT 133:120468

AB Title compds. R1CH:C(R2)P(O)(OR3)2 (R1, R2 = H, alkyl, cycloalkyl, aryl, heteroaryl, aralkyl, alkenyl, alkoxy, aryloxy, silyl; R3 = alkyl, cycloalkyl, aralkyl, aryl) are prepared by reaction of R1C.tplbond.CR2 with HP(O)(OR3)2 in the presence of Pd catalysts and R4R5P(CH2)3PR6R7 (R4-R7 = alkyl, cycloalkyl, aryl, aralkyl). Thus, reaction of 1-octyne with di-Me phosphite in the presence of Pd(OAc)2 and 1,3-bis(diphenylphosphino)propane at 100° for 6 h gave di-Me 1-octen-2-ylphosphinate.

L13 ANSWER 43 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of methyloximes as insecticides)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

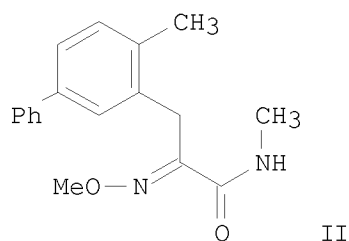
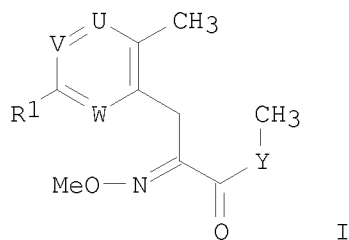
Ph2P- (CH2)3- PPh2

ACCESSION NUMBER: 2000:493503 HCAPLUS  
 DOCUMENT NUMBER: 133:104791  
 TITLE: Preparation and uses of methyloxime derivatives  
 INVENTOR(S): Kinoshita, Yoshiharu; Sakaguchi, Hiroshi; Manabe, Akio  
 PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan  
 SOURCE: PCT Int. Appl., 92 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041999	A1	20000720	WO 2000-JP60	20000111 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2001114737	A	20010424	JP 2000-468	20000105 <--
PRIORITY APPLN. INFO.:			JP 1999-5218	A 19990112 <--
			JP 1999-226308	A 19990810 <--

OTHER SOURCE(S): MARPAT 133:104791

GI



AB Title compds. [I; R1 = C6H5, 2-CH3C6H4, 4-CH3C6H4, 4-ClC6H4, 3-FC6H4, 4-CF3C6H4, 2-CH3OC6H4, 3-ClC6H4, 2,4-(CH3)2C6H3, CH3CO, Br, I, Cl, NO2, 2-CH3C6H4O, TMS-CC, CH3ON:C(CH3), CH3CH2CH2ON:C(CH3), (CH3CH2)3SiCC, (CH3)2(CH3O)CCC, (CH3)3CSi(CH3)2CC, (CH3)2(CH3CH2)CCC, etc; one of U and V is CR2 and the other CH or N; W = CR3, N; R2 and R3 are independently H, halogeno, C1-C6 alkyl; Y = O, NH] are prepared and are having plant disease controlling effects, insecticidal, and acaricidal activities. Thus, the title compound II was prepared and tested.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 44 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bisdiphenylphosphinopropane

RL: CAT (Catalyst use); USES (Uses)

(phosphinylation catalyst; preparation of optically active aminophosphines by optical resolution of aminohydroxybinaphthyl, condensation, phosphinylation, and reduction)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:464976 HCAPLUS

DOCUMENT NUMBER: 133:89643

TITLE: Preparation of optically active aminophosphines and optically active compounds using them

INVENTOR(S): Mikami, Koichi

PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

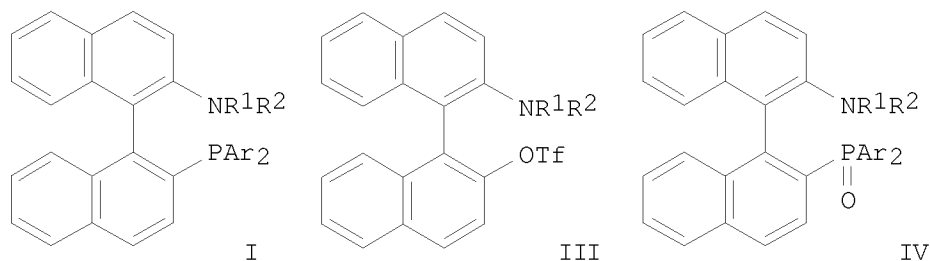
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000191676	A	20000711	JP 1998-367754	19981224 <--
PRIORITY APPLN. INFO.:			JP 1998-367754	19981224 <--
OTHER SOURCE(S):	CASREACT 133:89643; MARPAT 133:89643			
GI				



AB Title compds. I (R1, R2 = C1-4 alkyl; Ar = Ph, 4-tolyl, 3-tolyl, 3,5-xylyl 4-methoxyphenyl, 4-chlorophenyl) are prepared sequentially by reaction of racemic 2-amino-2'-hydroxy-1,1'-binaphthyl (II) with 1/2 equivalent mol of N-benzylcinchonidinium chloride, isolation of (R)-II addition products and (S)-II by preferential crystallization, protecting optically active I, reaction with triflic anhydride in the presence of tertiary amines, reaction of triflates III (R1, R2 = C1-4 alkyl) with diarylphosphine oxides in the presence of Pd(OAc)<sub>2</sub> 1,3-bis(diphenylphosphino)propane, and MeCH<sub>2</sub>N(Pr-iso)<sub>2</sub>, and reduction of phosphinyl compds. IV (R1, R2, Ar = same as above) with HSiCl<sub>3</sub> in the presence of Et<sub>3</sub>N. I was reacted with N-benzylcinchonidinium chloride in acetone under reflux for 4 h to give 45% (S)-I with > 99% e.e. Thus, (S)-2-dimethylamino-2'-diphenylphosphinyl-1,1'-binaphthyl (prepared from (S)-I) was reacted with HSiCl<sub>3</sub> in the presence of Et<sub>3</sub>N in PhMe at 100° for 6 h to give 90% (S)-2-dimethylamino-2'-diphenylphosphino-1,1'-binaphthyl, in the presence of which Me vinyl ketone was reacted with 4-trifluoromethylbenzaldehyde in MeCN at room temperature for 6 h to give 10% 3-[(4-trifluoromethylphenyl)hydroxy methyl]-3-buten-2-one with 14% e.e.

L13 ANSWER 45 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis-diphenylphosphinopropane  
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)  
(chelating agent; compns. and process of titanium-containing catalysts for esterification and transesterification or polycondensation)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:433356 HCAPLUS  
DOCUMENT NUMBER: 133:59221  
TITLE: Compositions and process of titanium-containing catalysts for esterification or transesterification and polycondensation  
INVENTOR(S): Putzig, Donald Edward; McBride, Edward Francis; Do, Hiep Quang; Trainham, James Arthur; Jaeger, Hermann Ludwig; Schulte, Heiner

PATENT ASSIGNEE(S): E. I. Du Pont de Nemours & Co., USA  
SOURCE: U.S., 11 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6080834	A	20000627	US 1999-293302	19990416 <--
CA 2366946	A1	20001026	CA 1999-2366946	19990420 <--
WO 2000062927	A1	20001026	WO 1999-US8637	19990420 <--
W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9935707	A	20001102	AU 1999-35707	19990420 <--
EP 1177042	A1	20020206	EP 1999-917634	19990420 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2003525103	T	20030826	JP 2000-612057	19990420 <--
IN 2001MN01126	A	20070420	IN 2001-MN1126	20010917 <--
MX 2001PA10421	A	20020506	MX 2001-PA10421	20011015 <--
PRIORITY APPLN. INFO.:			US 1999-293302	A 19990416 <--
			WO 1999-US8637	W 19990420 <--

OTHER SOURCE(S): MARPAT 133:59221

AB The compns. comprise an organic titanium compound, a complexing agent, a solvent, and optionally a cocatalyst and the process comprises contacting a carbonyl compound with an alc. under a condition suitable for esterification, transesterification or polycondensation to produce esters or polyesters with reduced color. Thus, 50 g tetraisopropyl titanate (TYZOR TPT) was added dropwise to a mixture of 70.8 g malic acid (I), 25 g phenylphosphinic acid (II) and 33.5 g p-toluenesulfonic acid monohydrate in 318 g ethylene glycol (III) and the reaction was kept at 40° for 2 h to give a yellow catalyst solution (A) containing 1.7% Ti and then 400 g

DMT oligomer made from di-Me terephthalate and ethylene glycol, 115 mL III and A with a ratio of I/TPT = 3 and II/TPT = 1 were polymerized at 275° and 120 torr to give a polyester with L-color value 76.90 and b-color value 11.22.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 46 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); USES (Uses)

(preparation of benzoic acids by carbonylation of benzenes with hydroxy compds.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:405843 HCAPLUS

DOCUMENT NUMBER: 133:17276

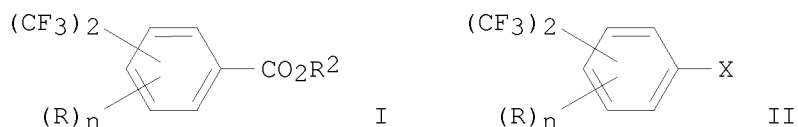
TITLE: Preparation of benzoic acids and their esters

INVENTOR(S): Koide, Makoto; Ishida, Michio; Morino, Jo; Hasegawa,

PATENT ASSIGNEE(S): Seiji; Narizuka, Satoru; Kume, Koji  
 SOURCE: Central Glass Co., Ltd., Japan  
 Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000169419	A	20000620	JP 1998-343402	19981202 <--
US 6268527	B1	20010731	US 1999-452945	19991202 <--
PRIORITY APPLN. INFO.:			JP 1998-343402	A 19981202 <--
OTHER SOURCE(S):	CASREACT 133:17276; MARPAT 133:17276			

GI



AB Title compds. I (R = F3C, F3CO, halo, NO2, acetyl, etc.; R2 = H, C1-10 alkyl; n = 0-3) are prepared by reaction of aromatic compds. II [R, n = same as I; X = halo, trifluoromethanesulfonate group, C1-4 alkyl sulfonate group, (un)substituted aryl sulfonate group] with CO and R2OH (R2 = same as I) in the presence of Group VIII metal compds., (R12P)2Q (R1 = Ph, o-methylphenyl, m-methylphenyl, p-methylphenyl; Q = divalent group), and bases. 3,5-Bis(trifluoromethyl)bromobenzene was reacted with H2O in the presence of NEt3, 1,4-bis(diphenylphosphino)butane(dppb), and PdCl2(dppb) at 105° under 7.5 kg/cm2 CO to give 99.0% 3,5-bis(trifluoromethyl)benzoic acid.

L13 ANSWER 47 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
 IT 6737-42-4  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (preparation of sulfonamides as medicines)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P- (CH2)3- PPh2

ACCESSION NUMBER: 2000:401825 HCAPLUS  
 DOCUMENT NUMBER: 133:43526  
 TITLE: Preparation of sulfonamides as medicines  
 INVENTOR(S): Kayakiri, Hiroshi; Abe, Yoshito; Hamashima, Hitoshi;  
 Sawada, Hitoshi; Ishibashi, Naoki; Setoi, Hiroyuki;  
 Oku, Teruo; Yamasaki, Noritsugu; Imoto, Takafumi;  
 Hiramura, Takahiro  
 PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 226 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

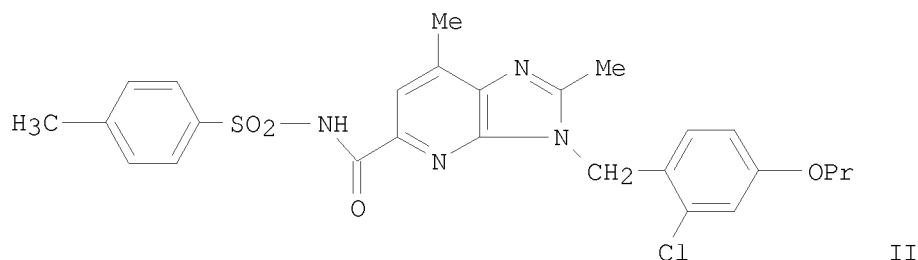
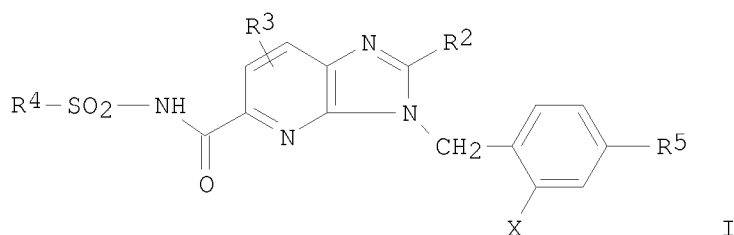
## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034277	A1	20000615	WO 1999-JP6748	19991201 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2352871	A1	20000615	CA 1999-2352871	19991201 <--
EP 1136492	A1	20010926	EP 1999-973290	19991201 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TR 200101568	T2	20011022	TR 2001-1568	19991201 <--
BR 9916919	A	20020115	BR 1999-16919	19991201 <--
HU 2001004549	A2	20020429	HU 2001-4549	19991201 <--
HU 2001004549	A3	20021228		
AU 769890	B2	20040205	AU 2000-14141	19991201 <--
TW 577889	B	20040301	TW 1999-88121089	19991202 <--
MX 2001PA05374	A	20011203	MX 2001-PA5374	20010529 <--
ZA 2001005493	A	20021003	ZA 2001-5493	20010703 <--
IN 2001CN00929	A	20050304	IN 2001-CN929	20010704 <--
US 6573274	B1	20030603	US 2001-856172	20010912 <--
US 20030171396	A1	20030911	US 2003-360806	20030210 <--
US 6890934	B2	20050510		

## PRIORITY APPLN. INFO.:

JP 1998-346175	A	19981204 <--
JP 1998-367540	A	19981224 <--
JP 1999-259283	A	19990809 <--
WO 1999-JP6748	W	19991201 <--
US 2001-856172	A3	20010912 <--

OTHER SOURCE(S): MARPAT 133:43526  
GI



AB Title sulfonamides [I; X = Cl, ; R2 = CH3; R3 = 7-CH3, H; R4 = 4-CH3C6H4, (E)-2(4-pyridyl)ethylene, (CH2)4OCOCH3, 4-CH3CH2OCOC6H4, 4-HOCC6H4, (CH2)4CH3, (CH2)3CH3, (CH2)2CH3, NH(CH2)4CH3; R5 = OCH(CH3)2, C6H5, OCH3, OCH2CH3, OCH2CH2CH3, OC(CH3)3, etc], or salts thereof; and drug compns. containing the same (wherein each symbol is as defined in the description) are prepared as preventive or therapeutic agents efficacious against diseases which can be cured through decrease in blood sugar level and those which can be cured through inhibition of cGMP-PDE, relaxation of smooth muscle, bronchodilation, vasodilation, inhibition of smooth muscle fiber, or inhibition of allergy. The title compound II was prepared and tested.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 48 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN

IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane

RL: RCT (Reactant); RACT (Reactant or reagent)

(di-, tri-, and tetrameric metallocene complexes for olefin or styrene polymerization)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:383684 HCAPLUS

DOCUMENT NUMBER: 133:17989

TITLE: Metallocene complexes and their preparation for olefin or styrene polymerization

INVENTOR(S): Lyu, Yi-Yeol; Yang, Duck-Joo; Yoon, Keun-Byoung; Chang, Seok; Jung, Won-Cheol

PATENT ASSIGNEE(S): Samsung General Chemicals Co., Ltd., S. Korea; Samsung Atofina Co., Ltd.

SOURCE: Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1006120	A2	20000607	EP 1999-117714	19990908 <--
EP 1006120	A3	20031105		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
KR 2000037984	A	20000705	KR 1998-52822	19981203 <--
US 6303805	B1	20011016	US 1999-392442	19990909 <--
JP 2000169493	A	20000620	JP 1999-279339	19990930 <--
JP 3330356	B2	20020930		

PRIORITY APPLN. INFO.: KR 1998-52822 A 19981203 <--

OTHER SOURCE(S): MARPAT 133:17989

AB The title metallocene complexes are prepared by reacting a transition metal complex of Group III-X, having ≥1 cycloalkanedienyl group, with a compound having ≥2 functional groups. The functional groups in the compound having ≥2 functional group are selected from OH, SH, NH<sub>2</sub>, RNH, RR'N, PH<sub>2</sub>, RPH, RR'P, and a thiirane group, where R, R' = hydrocarbyl. Thus, pentamethylcyclopentadienyltitanium trichloride was mixed with bisphenol A (in PhMe) at -78° and at room temperature for 15 h to give a metallocene catalyst for styrene polymerization (70°) to give

82% at catalyst activity 32,195 kg polymer/Ti-St-h.

L13 ANSWER 49 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4, 1,3-Bis(diphenylphosphino)propane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of metallocene polymerization catalysts for olefins)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:259786 HCAPLUS  
DOCUMENT NUMBER: 132:294137  
TITLE: Metallocene catalysts for olefin polymerization and  
polymerization method using them  
INVENTOR(S): Lyu, Yi-Yeol; Chang, Seok; Yoon, Keun-Byoung; Jung,  
Won-Cheol  
PATENT ASSIGNEE(S): Samsung General Chemicals Co., Ltd., S. Korea  
SOURCE: Eur. Pat. Appl., 31 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
EP 994132	A1	20000419	EP 1999-117715	19990908 <--
EP 994132	B1	20040804		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
KR 2000025587	A	20000506	KR 1998-42729	19981013 <--
US 6284701	B1	20010904	US 1999-294510	19990420 <--
EP 1302481	A2	20030416	EP 2002-28084	19990908 <--
R: CH, DE, FR, GB, IT, LI, SE				
EP 1302482	A2	20030416	EP 2002-28085	19990908 <--
R: CH, DE, FR, GB, IT, LI, SE				
EP 1302483	A2	20030416	EP 2002-28086	19990908 <--
R: CH, DE, FR, GB, IT, LI, SE				
JP 2000128915	A	20000509	JP 1999-279338	19990930 <--
JP 3125253	B2	20010115		

PRIORITY APPLN. INFO.: KR 1998-42729 A 19981013 <--  
EP 1999-117715 A3 19990908 <--

OTHER SOURCE(S): MARPAT 132:294137

AB The metallocene catalysts are prepared by reacting a metallocene compound with a compound having  $\geq 2$  functional groups. The metallocene compound is a transition metal compound, which is coordinated with a main ligand such as cyclopentadienyl group, and an ancillary ligand. The compound have functional groups selected from the group consisting of a hydroxy group, an alkyl or aryl magnesium halide, a thiol group, a primary or a secondary amine group, a primary or a secondary phosphorous group, etc. The metallocene catalysts are employed with a co-catalyst (e.g., an organometallic compound, or a mixture of non-coordinated Lewis acid and alkylaluminium) for olefin polymerization. Thus, reaction of 0.1 mmol bis(butylcyclopentadienyl)zirconium dichloride with 0.05 mmol bisphenol A gave a bimetallic compound, which was used as catalysts for polymerization of ethylene.

L13 ANSWER 50 OF 279 HCAPLUS COPYRIGHT 2008 ACS on STN  
IT 6737-42-4P, 1,3-Bis(diphenylphosphino)propane

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)

(processes for preparation of phosphorus-containing compds. and their  
intermediates as polymerization catalyst)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

ACCESSION NUMBER: 2000:117057 HCAPLUS

DOCUMENT NUMBER: 132:151977

TITLE: Phosphorus-containing compounds, processes for their  
preparation and intermediates therefor, their use in  
the catalysis of copolymerization processes, and  
copolymers thereby produced

INVENTOR(S): Eilenberg, Wolf; Van Ginkel, Roelof; Van der Made,  
Alexander Willem; De With, Jan

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.; Eilenberg-Robben, Ursula

SOURCE: PCT Int. Appl., 65 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2000008030	A2	20000217	WO 1999-EP5748	19990803 <--
WO 2000008030	A3	20000525		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2339165	A1	20000217	CA 1999-2339165	19990803 <--
AU 9953743	A1	20000228	AU 1999-53743	19990803 <--
AU 746518	B2	20020502		
EP 1102771	A2	20010530	EP 1999-939459	19990803 <--
EP 1102771	B1	20060503		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY			
JP 2002522441	T	20020723	JP 2000-563663	19990803 <--
AT 325126	T	20060615	AT 1999-939459	19990803 <--
EP 1671976	A1	20060621	EP 2005-19845	19990803 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY			
US 6548708	B1	20030415	US 2001-762264	20010202 <--
US 20030109754	A1	20030612	US 2003-346297	20030115 <--
US 6720442	B2	20040413		
US 20040147785	A1	20040729	US 2004-758831	20040115 <--
US 7067701	B2	20060627		
PRIORITY APPLN. INFO.:			EP 1998-306254	A 19980805 <--
			EP 1998-203587	A 19981023 <--
			EP 1999-939459	A3 19990803 <--
			WO 1999-EP5748	W 19990803 <--
			US 2001-762264	A3 20010202 <--

OTHER SOURCE(S): CASREACT 132:151977; MARPAT 132:151977

AB This invention relates to processes for preparation of phosphorus compds. R2P-X-PR2, R2P-M, R2P-L and R3P, and the novel cation R2P+(L)-X-P+(L)R2 (R = optionally substituted hydrocarbonyl, X = bridging group, L = leaving group, M = alkali metal atom). The invention relates further to a process for making a compound R2P-L from a compound R-H via a new process for making the compound R-Li followed by its reaction with a compound Hal2P-L. The compound R2P-X-PR2 is a ligand suitable for making catalysts for copolymerization of carbon monoxide and an olefinically unsaturated compound. Thus, lithiation of anisole with BuLi in tert-Bu Me ether/hexane gave 2-lithioanisole which on phosphination with PCl3 gave title ligand, tri(2-anisyl)phosphine.

=> d his

(FILE 'HOME' ENTERED AT 15:55:23 ON 28 AUG 2008)

FILE 'REGISTRY' ENTERED AT 15:55:34 ON 28 AUG 2008

L1 STRUCTURE UPLOADED

L2 46 S L1 FULL

FILE 'HCAPLUS' ENTERED AT 16:00:15 ON 28 AUG 2008

L3 3 S L2

FILE 'REGISTRY' ENTERED AT 16:01:45 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:01:46 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:01:54 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:01:58 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:02:33 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:02:35 ON 28 AUG 2008

FILE 'REGISTRY' ENTERED AT 16:03:13 ON 28 AUG 2008

FILE 'HCAPLUS' ENTERED AT 16:03:33 ON 28 AUG 2008

L4 0 S US 20060128721\PN

L5 0 S US20060128721\PN

L6 1 S US20060128721\PN

SEL RN

FILE 'REGISTRY' ENTERED AT 16:07:36 ON 28 AUG 2008

L7 223 S E1-E223

L8 9 S L7 AND NRS=3

L9 171 S L7 AND NRS>3

L10 180 S L8 OR L9

FILE 'HCAPLUS' ENTERED AT 16:25:42 ON 28 AUG 2008

L11 1598 S L9

L12 1286 S L11 NOT (2008/SO OR 2007/SO OR 2006/SO OR 2005/SO OR 2004/SO)

L13 279 S L12 AND (PY<2003 AND AY<2003 AND PRY<2003)

=> s l9 not 6737-42-4/rn

1598 L9

1589 6737-42-4

75 6737-42-4D

1524 6737-42-4/RN

(6737-42-4 (NOTL) 6737-42-4D )

L14 74 L9 NOT 6737-42-4/RN

=> d 114 1-74 ibib abs hitstr

L14 ANSWER 1 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1315883 HCAPLUS

DOCUMENT NUMBER: 148:146881

TITLE: Process Development of the Synthetic Route to R116301

AUTHOR(S): Guillaume, Michel; Cuypers, Jef; Dingenen, Jul

CORPORATE SOURCE: Chemical Process Research, Johnson & Johnson  
Pharmaceutical Research and Development, Beerse, 2340,  
Belg.

SOURCE: Organic Process Research & Development (2007), 11(6),  
1079-1086

CODEN: OPRDFK; ISSN: 1083-6160

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis route of compound 1 (R116301), a nonpeptidic neurokinin (NK1) small mol. receptor antagonist, is described, which was developed to prepare pilot scale quantities (20-50 kg). The synthesis involves the sec-BuLi deprotonation of 1-tert-butoxycarbonyl-4-piperidone ethylene ketal, followed by benzaldehyde addition and ring closure to the cyclic carbamate ( $\pm$ )-Tetrahydro-1'-phenylspiro[1,3-dioxolan-2,7'(8'H)-3H-oxazolo[3,4-a]pyridin]-3'-one. The piperidine acetal ( $\pm$ )-7-(Phenylmethyl)-1,4-dioxo-8-azaspiro[4.5]decane, is resolved with Brown's acid and acylated. The ketone obtained after piperidine acetal deprotection undergoes reductive amination with N-benzyl piperazine, the most critical step in the synthesis. After debenzylation, final coupling and salt formation, compound 1 is obtained over 10 steps with 4% overall yield.

IT 681291-91-8P, (+)-(2R-trans)-1-[3,5-Bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]piperidine

681291-92-9P, (+)-(2R-trans)-1-[3,5-Bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-(1-piperazinyl)piperidine

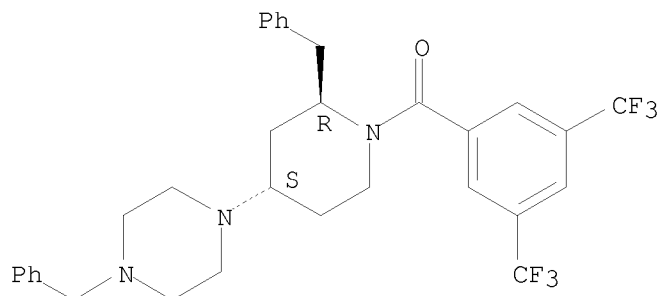
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(process development and pilot scale synthesis steps for R116301)

RN 681291-91-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

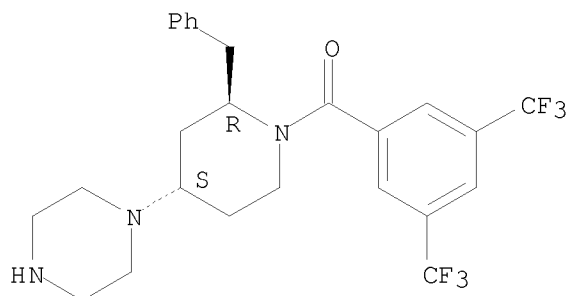
Absolute stereochemistry. Rotation (+).



RN 681291-92-9 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1228688 HCAPLUS

DOCUMENT NUMBER: 145:506326

TITLE: Aliphatic ketone derivatives with high crystallinity and moldability, and their moldings

INVENTOR(S): Yonemura, Masami; Sasaki, Takeharu

PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006316080	A	20061124	JP 2005-136774	20050510
PRIORITY APPLN. INFO.:			JP 2005-136774	20050510
AB The ketone derivs., useful for separation membranes, etc., contain units of CH2CH2, CH2CHR1, CO, O[(CR2R3)n1O]n2, and [OCH2CH2(CR4R5CR6R7)n3CH2CH2O] (R1-7 = H, C1-12 hydrocarbyl, halo, OH, ester, alkoxy, cyano, imide, silyl; R5 and R6 may be connected to form rings; 1 ≤ n1 ≤ 20; 1 ≤ n2 ≤ 35,000; 1 ≤ n3 ≤ 40,000). Thus, polyethylene glycol (PEG 2000), ethylene, propylene, and carbon monoxide were polymerized at 90° in the presence of a catalyst prepared from 28.6 μmol palladium acetate and 18.9 mmol 1,3-bis(diphenylphosphino)propane to give a copolymer showing Mn (GPC) 5.1 + 104, Mw/Mn 2.89, PEG content 8.4 weight%, m.p. 234°, and crystallinity 50%.				
IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, complexes with palladium acetate				
RL: CAT (Catalyst use); USES (Uses) (aliphatic ketone derivs. with high crystallinity and moldability for moldings)				
RN 6737-42-4 HCAPLUS				
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)				

Ph2P-(CH2)3-PPh2

L14 ANSWER 3 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1067711 HCAPLUS

DOCUMENT NUMBER: 145:429061

TITLE: Electroluminescent devices using Group VIII element complexes with dianionic tridentate cyclometallating

INVENTOR(S): ligands and the complexes  
 Huo, Shouquan  
 PATENT ASSIGNEE(S): Eastman Kodak Company, USA  
 SOURCE: U.S. Pat. Appl. Publ., 36pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060228579	A1	20061012	US 2005-102380	20050408
PRIORITY APPLN. INFO.:			US 2005-102380	20050408

OTHER SOURCE(S): MARPAT 145:429061

AB Electroluminescent devices with light-emitting layers containing a light-emitting material that contains an organometallic complex are described in which the complex includes a Group VIII element coordinated with a dianionic tridentate cyclometallating ligand bonded through a carbon and two heteroatoms to form a five or six-membered metallocycle in which each bonding atom can also be a part of a sep. cyclic or acyclic structure. The organometallic compds., including binuclear compds., are also described.

IT 6737-42-4D, compds. with complexed Group VIII elements  
 RL: DEV (Device component use); USES (Uses)  
 (electroluminescent devices using Group VIII element complexes with dianionic tridentate cyclometallating ligands and complexes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P<sup>-</sup> (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 4 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:45104 HCAPLUS

DOCUMENT NUMBER: 144:293114

TITLE: Comparative Study on Catalytic Systems for the Alternating and Nonalternating CO/Ethene Copolymerization

AUTHOR(S): Haras, Alicja; Michalak, Artur; Rieger, Bernhard; Ziegler, Tom

CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SOURCE: Organometallics (2006), 25(4), 946-953  
 CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Drent et al. [Chemical Commun. 2002, 9, 964] have recently shown that a neutral (P-O)Pd(II) catalyst based on o-alkoxy derivs. of diphenylphosphinobenzene sulfonic acid (1a) can perform nonalternating CO/C<sub>2</sub>H<sub>4</sub> copolymn. in which the resulting polyketone can have one or more subsequent ethylene units. We have analyzed this catalyst by comparing it to a cationic palladium catalyst, [(P-P)Pd(II)+] (1c), (P-P) = dppp = Ph<sub>2</sub>P<sup>-</sup>(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>, that affords polyketones with strictly alternating CO and C<sub>2</sub>H<sub>4</sub> units. We have also investigated a derivative (1b) of 1a in which the o-methoxy substituents were replaced by a o-iso-Pr group in order to investigate whether increasing the steric bulk enhances the degree of nonalternation.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, palladium complex

RL: CAT (Catalyst use); USES (Uses)

(comparison of catalytic systems for the alternating and nonalternating carbon monoxide-ethylene copolymn.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1350732 HCAPLUS

DOCUMENT NUMBER: 144:81208

TITLE: (2-Benzyl-4-{4-[1-(tetrahydrofuran-3-carbonyl)-pyrrolidin-3-yl]-piperazin-1-yl}-piperidin-1-yl)-(3,5-trifluoromethylphenyl)methanone for the treatment of schizophrenia

INVENTOR(S): Lesage, Anne Simone Josephine; Ashton, David; Janssens, Frans Eduard

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

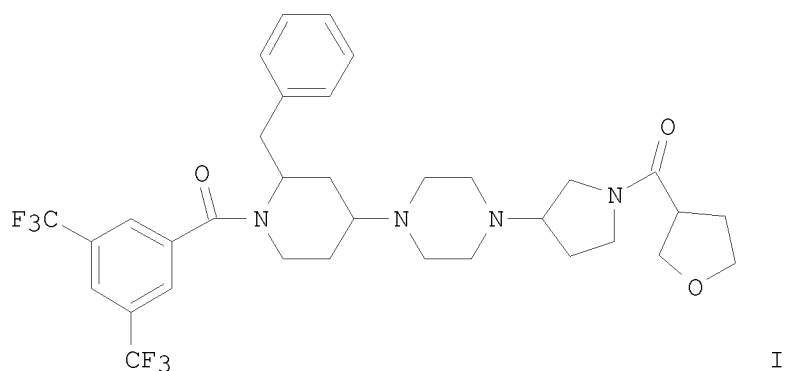
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005123081	A2	20051229	WO 2005-EP52887	20050621
WO 2005123081	A3	20060316		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.:

EP 2004-102885

A 20040622

GI



AB This invention discloses the use of (2-benzyl-4-{4-[1-(tetrahydrofuran-3-carbonyl)pyrrolidin-3-yl]-piperazin-1-yl}-piperidin-1-yl)-(3,5-trifluoromethylphenyl)methanone and its derivs. having neurokinin antagonistic activity, in particular a combined NK1/NK2/NK3 antagonistic activity to modulate the activity of dopaminergic pathways in the brain, as a medicine for the prophylactic and/or therapeutic treatment of schizophrenia. Compds. of the invention include I and the pharmaceutically acceptable acid or base addition salts thereof, the stereochem. isomeric forms thereof, the N-oxide form thereof, and prodrugs thereof. Compound preparation is described.

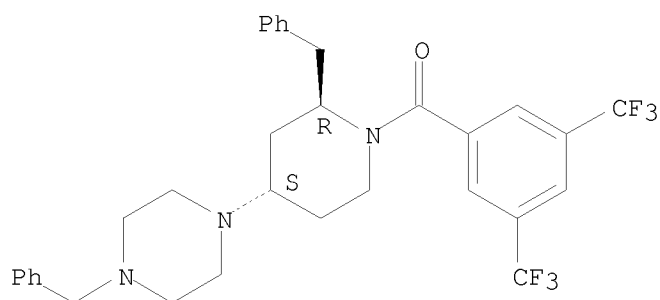
IT 681291-91-8P

RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(piperazinyl derivative neurokinin antagonist for treatment of schizophrenia)

RN 681291-91-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L14 ANSWER 6 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:1124643 HCAPLUS

DOCUMENT NUMBER: 142:93853

TITLE: Drug combinations comprising opioid analgesics and 1-(1,2-disubstituted piperidinyl)-4-substituted piperazines and preparation of the latter.

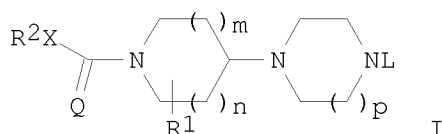
INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; Leenaerts, Joseph Elisabeth; Van Roosbroeck, Yves Emiel Maria; Meert, Theo Frans

PATENT ASSIGNEE(S): Janssen Pharmaceutica N. V., Belg.

SOURCE: PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004110451	A1	20041223	WO 2004-EP51050	20040607
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1635833	A1	20060322	EP 2004-741745	20040607
EP 1635833	B1	20080514		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
AT 395062	T	20080515	AT 2004-741745	20040607
US 20080070924	A1	20080320	US 2005-560482	20051212
PRIORITY APPLN. INFO.:			WO 2003-EP6118	A 20030610
			WO 2004-EP51050	W 20040607

OTHER SOURCE(S): MARPAT 142:93853  
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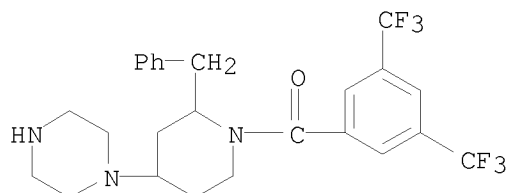
AB Claimed is a pharmaceutical composition comprising a carrier, an opioid analgesic, and a piperazine [I; m, p = 1, 2; n = 0-2; when m = 2, then n = 1; Q = O, NR<sub>3</sub>; X = bond, O, S, NR<sub>3</sub>; R<sub>1</sub> = (substituted) Ph, phenylalkyl; R<sub>2</sub> = naphthyl(alkyl), (substituted) phenyl(alkyl), heterocycl(alkyl); R<sub>3</sub> = H, alkyl; L = (substituted) Ph, alkyl, alkenyl, aralkenyl, diarylalkenyl, etc.]. Thus, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-benzyl-4-piperidinone (preparation given) and N-(2,6-dimethylphenyl)-1-piperazineacetamide in CH<sub>2</sub>Cl<sub>2</sub> were treated with Ti(OiPr)<sub>4</sub>; the mixture was stirred 3 h followed by addition of NaBH<sub>3</sub>CN in EtOH and the mixture was stirred overnight to give racemic trans- coupling product. This was separated on Chiralcel OD using MeOH to obtain (+)-trans-4-[1-[3,5-bis(trifluoromethyl)benzoyl]-2-benzyl-4-piperidinyl]-N-(2,6-dimethylphenyl)-1-piperazineacetamide. The latter as the L-malate salt at 10-40 mg/kg i.p. used with 0.8 mg/kg morphine in ferrets significantly reduced the number of retches. The pharmaceutical composition of the invention reduces unwanted side-effects associated with opioid analgesics, in particular respiratory depression and tolerance, thereby increasing the total tolerability of said opioids in pain treatment.

IT 190965-10-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
(drug combinations comprising opioid analgesics and  
piperidinylpiperazines)

RN 190965-10-7 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)



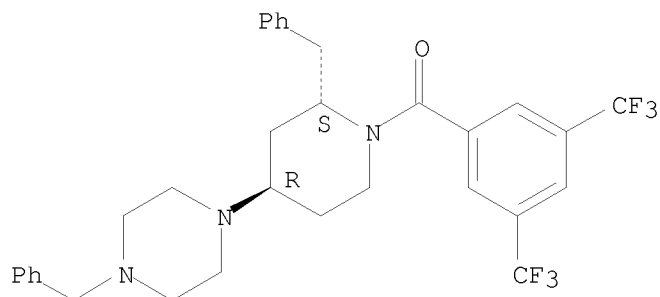
IT 190963-29-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(drug combinations comprising opioid analgesics and  
piperidinylpiperazines)

RN 190963-29-2 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:550951 HCAPLUS

DOCUMENT NUMBER: 141:89120

TITLE: Preparation of substituted 4-(4-piperidin-4-yl-  
piperazin-1-yl)-azepane derivatives and their use as  
neurokinin antagonists

INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De  
Boeck, Benoit Christian Albert Ghislain; Leenaerts,  
Joseph Elisabeth

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004056805      A1      20040708      WO 2003-EP51043      20031217
W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
    CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
    GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
    LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
    NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
    TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
    BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
    ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
    TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
CA 2509090          A1      20040708      CA 2003-2509090      20031217
AU 2003298369      A1      20040714      AU 2003-298369      20031217
EP 1578744          A1      20050928      EP 2003-796109      20031217
EP 1578744          B1      20080709
R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
    IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
JP 2006512350      T      20060413      JP 2004-561506      20031217
AT 400568           T      20080715      AT 2003-796109      20031217
US 20060058285     A1      20060316      US 2005-540456      20050622
PRIORITY APPLN. INFO.:
WO 2002-EP14834      A      20021223
WO 2003-EP51043      W      20031217

OTHER SOURCE(S):      MARPAT 141:89120
GI

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\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. I [Q = O or NR<sub>3</sub>; X = covalent bond, -O-, -S-, or -NR<sub>3</sub>; R<sub>1</sub> independently = Ar<sub>1</sub>, Ar<sub>1</sub>-alkyl, and di(Ar<sub>1</sub>)-alkyl; R<sub>2</sub> = Ar<sub>2</sub>, Ar<sub>2</sub>-alkyl, di(Ar<sub>2</sub>)-alkyl Het<sub>1</sub>, Het<sub>1</sub>-alkyl; R<sub>3</sub> independently = H or alkyl; Y = covalent bond, -CO-, -SO<sub>2</sub>-, >C:CHR or >C:NR, wherein R = H, CN or NO<sub>2</sub>; M independently = covalent bond, (un)substituted-alkyl, -(un)saturated carbocycle; L = H, alkyloxy, Ar<sub>3</sub>oxy, alkylamine, etc.; Ar<sub>1</sub> = (un)substituted phenyl; Ar<sub>2</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, aminocarbonyl, and alkyloxy; Ar<sub>3</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, amino, alkyloxy, OH, pyridinyl, etc.; Het<sub>1</sub> = monocyclic heterocyclic radical selected from pyrrolyl, pyrazolyl, imidazolyl, furanyl, etc.; m = 1 or 2 provided that if m = 2, then n = 1; n = 0-2; p = 1-2; q = 0-1] and their pharmaceutically acceptable salts having neurokinin antagonistic activity, in particular NK<sub>1</sub> antagonistic activity, their preparation, compns. comprising them and their use as a medicine, in particular for the treatment of pain, emesis, anxiety, depression and IBS are disclosed. Thus, e.g., II was prepared via resolution of intermediate III (preparation given), de-N-benzylolation, and reaction with 4-oxoazepan-1-carboxylic acid tert-Bu ester. The receptor binding values (pIC<sub>50</sub>) for the h-NK<sub>1</sub> ranges for all compds. according to the invention between 10 and 6. In view of their capability to antagonize the actions of tachykinins by blocking the neurokinin receptors, and in particular antagonizing the actions of substance P and Neurokinin B by blocking the NK<sub>1</sub>, NK<sub>2</sub> and NK<sub>3</sub> receptors, the compds. according to the invention are useful as a medicine, in particular in the prophylactic and therapeutic treatment of tachykinin-mediated conditions, such as, for instance CNS disorders, in particular schizoaffective disorders, depression, anxiety disorders, stress-related disorders, sleep disorders, cognitive disorders, personality disorders, eating disorders, neurodegenerative diseases, addiction disorders, mood disorders, sexual dysfunction, pain and other CNS-related conditions ; inflammation ; allergic disorders ; emesis ;

gastrointestinal disorders, in particular irritable bowel syndrome (IBS); skin disorders ; vasospastic diseases ; fibrosing and collagen diseases ; disorders related to immune enhancement or suppression and rheumatic diseases and body weight control.

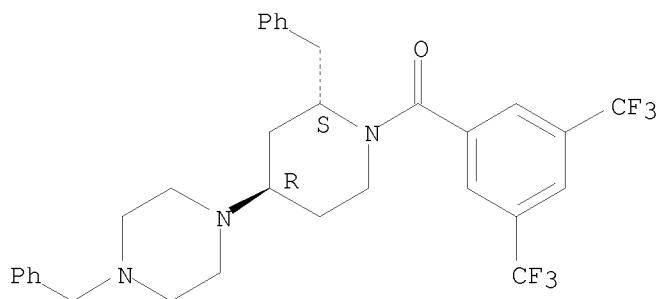
IT 190963-29-2P

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (intermediate; stereoselective preparation of piperidinylpiperazinylazepanes with tachykinin antagonist activity)

RN 190963-29-2 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



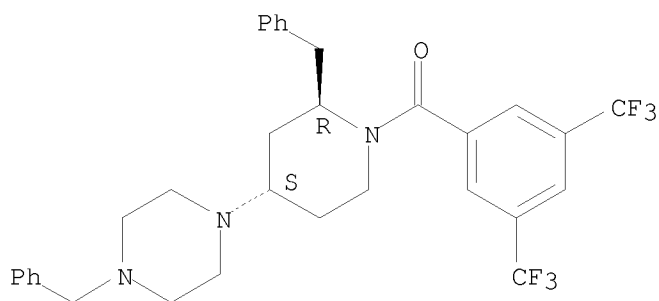
IT 681291-91-8P

RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (intermediate; stereoselective preparation of piperidinylpiperazinylazepanes with tachykinin antagonist activity)

RN 681291-91-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



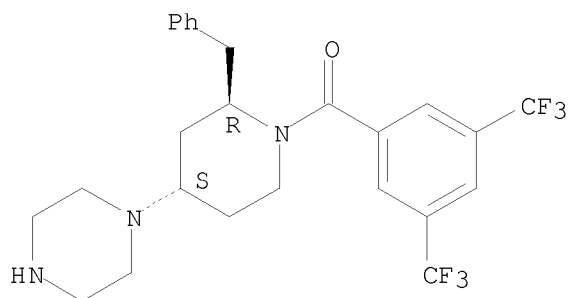
IT 681291-92-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (intermediate; stereoselective preparation of piperidinylpiperazinylazepanes with tachykinin antagonist activity)

RN 681291-92-9 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:550949 HCAPLUS

DOCUMENT NUMBER: 141:106497

TITLE: Preparation of substituted 1-piperidin-4-yl-4-azetidin-3-yl-piperazine derivatives and their use as neurokinin antagonists

INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 52 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056800	A1	20040708	WO 2003-EP51042	20031217
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2509406	A1	20040708	CA 2003-2509406	20031217
AU 2003299249	A1	20040714	AU 2003-299249	20031217
EP 1581517	A1	20051005	EP 2003-799583	20031217
EP 1581517	B1	20070221		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
JP 2006512349	T	20060413	JP 2004-561505	20031217
AT 354572	T	20070315	AT 2003-799583	20031217
ES 2282731	T3	20071016	ES 2003-799583	20031217
US 20060074069	A1	20060406	US 2005-540304	20050621
PRIORITY APPLN. INFO.:			WO 2002-EP14837	A 20021223
			WO 2003-EP51042	W 20031217

OTHER SOURCE(S): MARPAT 141:106497

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

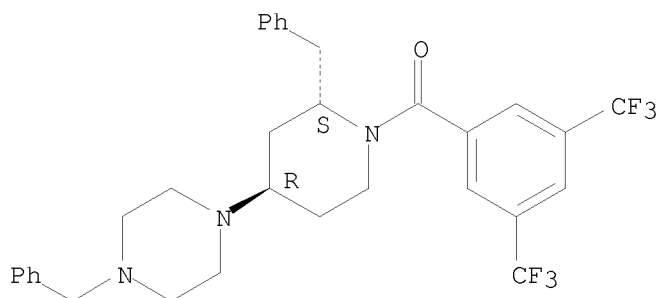
AB Title compds. I [Q = O or NR<sub>3</sub>; X = covalent bond, -O-, -S-, or -NR<sub>3</sub>; R<sub>1</sub> independently = Ar<sub>1</sub>, Ar<sub>1</sub>-alkyl, and di(Ar<sub>1</sub>)-alkyl; R<sub>2</sub> = Ar<sub>2</sub>, Ar<sub>2</sub>-alkyl, di(Ar<sub>2</sub>)-alkyl Het<sub>1</sub>, Het<sub>1</sub>-alkyl; R<sub>3</sub> independently = H or alkyl; Y = covalent bond, -CO-, -SO<sub>2</sub>-, >C:CHR or >C:NR, wherein R = H, CN or NO<sub>2</sub>; M independently = covalent bond, (un)substituted-alkyl, -(un)saturated carbocycle; L = H, alkyloxy, Ar<sub>3</sub>oxy, alkylamine, etc.; Ar<sub>1</sub> = (un)substituted phenyl; Ar<sub>2</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, aminocarbonyl, and alkyloxy; Ar<sub>3</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, amino, alkyloxy, OH, pyridinyl, etc.; Het<sub>1</sub> = monocyclic heterocyclic radical selected from pyrrolyl, pyrazolyl, imidazolyl, furanyl, etc.; m = 1 or 2 provided that if m = 2, then n = 1; n = 0-2; p = 1-2; q = 0-1] and their pharmaceutically acceptable salts having neurokinin antagonistic activity, in particular NK<sub>1</sub> antagonistic activity and NK<sub>1</sub>/NK<sub>3</sub>- antagonistic activity, their preparation, compns. comprising them and their use as a medicine, in particular for the treatment of schizophrenia, emesis, anxiety, depression, irritable bowel syndrome (IBS), circadian rhythm disturbances, pain, neurogenic inflammation, asthma, micturition disorders such as urinary incontinence and nociception are disclosed. Thus, e.g., II was prepared by reaction of (2R-trans)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-(1-piperazinyl)piperidine (preparation given) with 1-(diphenylmethyl)-3-azetidiny methanesulfonate. For selected compds. of the invention, receptor binding pIC<sub>50</sub> values for h-NK<sub>1</sub> were in a range from 6.69-8.13. In view of their capability to antagonize the actions of tachykinins by blocking the neurokinin receptors, and in particular antagonizing the actions of substance P by blocking the NK receptors, the compds. according to the invention are useful as a medicine, in particular in the prophylactic and therapeutic treatment of tachykinin mediated conditions, such as, for instance CNS disorders, in particular depression, anxiety disorders, stress-related disorders, sleep disorders, cognitive disorders, personality disorders, schizoaffective disorders, eating disorders, neurodegenerative diseases, addiction disorders, mood disorders, sexual dysfunction, pain and other CNS related conditions ; inflammation ; allergic disorders ; emesis ; gastrointestinal disorders, in particular irritable bowel syndrome (IBS); skin disorders ; vasospastic diseases ; fibrosing and collagen diseases ; disorders related to immune enhancement or suppression and rheumatic diseases and body weight control.

IT 190963-29-2P  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (stereoselective preparation of piperidinylazetidiny piperazines with tachykinin antagonist activity)

RN 190963-29-2 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



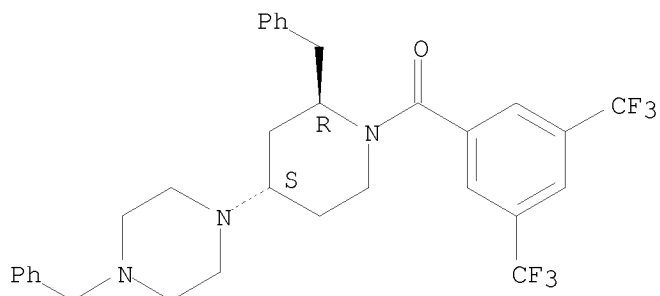
IT 681291-91-8P

RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(stereoselective preparation of piperidinylazetidinylpiperazines with tachykinin antagonist activity)

RN 681291-91-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

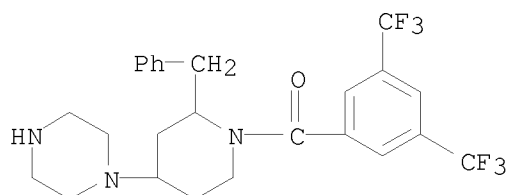


IT 190965-10-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(stereoselective preparation of piperidinylazetidinylpiperazines with tachykinin antagonist activity)

RN 190965-10-7 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)



REFERENCE COUNT:

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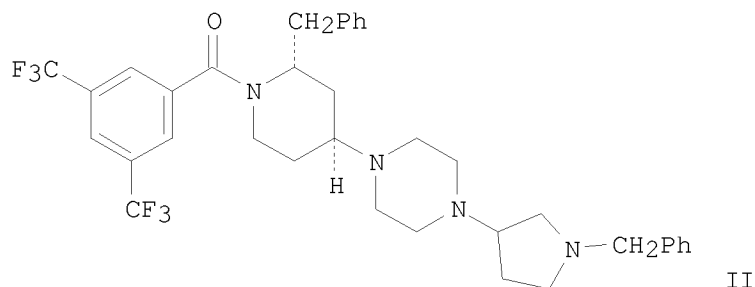
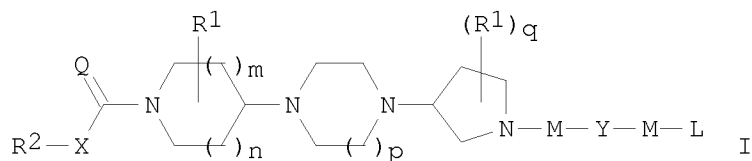
THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:550948 HCAPLUS

DOCUMENT NUMBER: 141:106496  
 TITLE: Preparation of substituted 1-piperidin-4-yl-4-pyrrolidin-3-yl-piperazine derivatives and their use as neurokinin antagonists  
 INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth  
 PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.  
 SOURCE: PCT Int. Appl., 123 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056799	A2	20040708	WO 2003-EP51041	20031217
WO 2004056799	A3	20040812		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2508657	A1	20040708	CA 2003-2508657	20031217
AU 2003302488	A1	20040714	AU 2003-302488	20031217
EP 1581518	A2	20051005	EP 2003-810849	20031217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003017658	A	20051206	BR 2003-17658	20031217
CN 1726207	A	20060125	CN 2003-80106356	20031217
JP 2006514027	T	20060427	JP 2004-561504	20031217
NZ 541035	A	20080530	NZ 2003-541035	20031217
IN 2005DN02725	A	20070105	IN 2005-DN2725	20050620
US 20060040950	A1	20060223	US 2005-540447	20050622
ZA 2005005069	A	20060927	ZA 2005-5069	20050622
MX 2005PA06887	A	20050816	MX 2005-PA6887	20050623
NO 2005003569	A	20050915	NO 2005-3569	20050721
PRIORITY APPLN. INFO.:			WO 2002-EP14831	A 20021223
			WO 2003-EP51041	W 20031217
OTHER SOURCE(S):	MARPAT 141:106496			
GI				



AB Title compds. I [Q = O or NR<sub>3</sub>; X = covalent bond, -O-, -S-, or -NR<sub>3</sub>; R<sub>1</sub> independently = Ar<sub>1</sub>, Ar<sub>1</sub>-alkyl, and di(Ar<sub>1</sub>)-alkyl; R<sub>2</sub> = Ar<sub>2</sub>, Ar<sub>2</sub>-alkyl, di(Ar<sub>2</sub>)-alkyl Het<sub>1</sub>, Het<sub>1</sub>-alkyl; R<sub>3</sub> independently = H or alkyl; Y = covalent bond, -CO-, -SO<sub>2</sub>-, >C:CHR or >C:NR, wherein R = H, CN or NO<sub>2</sub>; M independently = covalent bond, (un)substituted-alkyl, -(un)saturated carbocycle; L = H, alkyloxy, Ar<sub>3</sub>oxy, alkylamine, etc.; Ar<sub>1</sub> = (un)substituted phenyl; Ar<sub>2</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, aminocarbonyl, and alkyloxy; Ar<sub>3</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, amino, alkyloxy, OH, pyridinyl, etc.; Het<sub>1</sub> = monocyclic heterocyclic radical selected from pyrrolyl, pyrazolyl, imidazolyl, furanyl, etc.; m = 1 or 2 provided that if m = 2, then n = 1; n = 0-2; p = 1-2; q = 0-1] and their pharmaceutically acceptable salts having neurokinin antagonistic activity, in particular NK<sub>1</sub> antagonistic activity, a combined NK<sub>1</sub>/NK<sub>3</sub> antagonistic activity and a combined NK<sub>1</sub>/NK<sub>2</sub>/NK<sub>3</sub> antagonistic activity, their preparation, compns. comprising them and their use as a medicine, in particular for the treatment of schizophrenia, anxiety, depression, emesis and IBS are disclosed. Thus, e.g., II was prepared by reaction of (2R-trans) 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-(1-piperazinyl)piperidine (preparation given) and 1-(phenylmethyl)-3-pyrrolidinone. The receptor binding values (pIC<sub>50</sub>) for the h-NK<sub>1</sub> ranges for all compds. according to the invention between 10 and 6. In view of their capability to antagonize the actions of tachykinins by blocking the neurokinin receptors, and in particular antagonizing the actions of substance P and Neurokinin B by blocking the NK<sub>1</sub>, NK<sub>2</sub> and NK<sub>3</sub> receptors, the compds. according to the invention are useful as a medicine, in particular in the prophylactic and therapeutic treatment of tachykinin-mediated conditions, such as, for instance CNS disorders, in particular schizoaffective disorders, depression, anxiety disorders, stress-related disorders, sleep disorders, cognitive disorders, personality disorders, eating disorders, neurodegenerative diseases, addiction disorders, mood disorders, sexual dysfunction, pain and other CNS-related conditions ; inflammation ; allergic disorders ; emesis ; gastrointestinal disorders, in particular irritable bowel syndrome (IBS); skin disorders ; vasospastic diseases ; fibrosing and collagen diseases ; disorders related to immune enhancement or suppression and rheumatic diseases and body weight control.

IT 681291-91-8P 681291-92-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

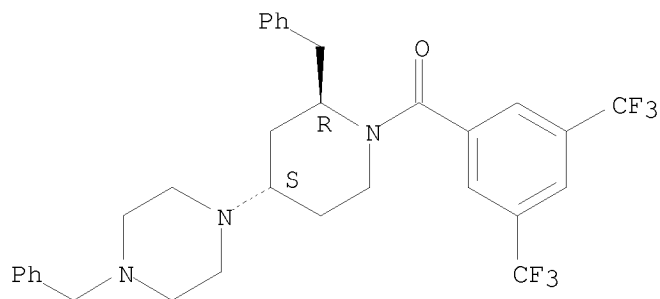
(Reactant or reagent)

(stereoselective preparation of piperidinylpyrrolidinylpiperazines with tachykinin antagonist activity)

RN 681291-91-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

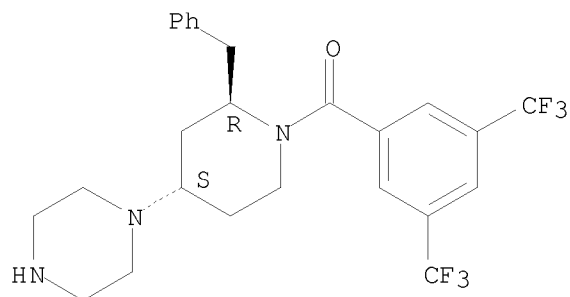
Absolute stereochemistry. Rotation (+).



RN 681291-92-9 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L14 ANSWER 10 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:550876 HCAPLUS

DOCUMENT NUMBER: 141:106495

TITLE: Substituted 1-piperidin-3-yl-4-piperidin-4-yl-piperazine derivatives and their use as neurokinin antagonists

INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 77 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056364	A1	20040708	WO 2003-EP51035	20031217

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2509088	A1	20040708	CA 2003-2509088	20031217
AU 2003300578	A1	20040714	AU 2003-300578	20031217
EP 1578425	A1	20050928	EP 2003-813610	20031217
EP 1578425	B1	20071121		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003017667	A	20051129	BR 2003-17667	20031217
CN 1728999	A	20060201	CN 2003-80107008	20031217
JP 2006512348	T	20060413	JP 2004-561502	20031217
NZ 541036	A	20070727	NZ 2003-541036	20031217
ES 2297275	T3	20080501	ES 2003-813610	20031217
IN 2005DN02711	A	20070105	IN 2005-DN2711	20050620
ZA 2005005070	A	20060927	ZA 2005-5070	20050622
US 20060252747	A1	20061109	US 2005-540045	20050622
MX 2005PA06888	A	20050816	MX 2005-PA6888	20050623
NO 2005003598	A	20050920	NO 2005-3598	20050722
PRIORITY APPLN. INFO.:			WO 2002-EP14835	A 20021223
			EP 2003-813610	A 20031217
			WO 2003-EP51035	W 20031217
OTHER SOURCE(S):		MARPAT 141:106495		
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. I [Q = O or NR3; X = covalent bond, -O-, -S-, or -NR3; R1 independently = Ar1, Ar1-alkyl, and di(Ar1)-alkyl; R2 = Ar2, Ar2-alkyl, di(Ar2)-alkyl Het1, Het1-alkyl; R3 independently = H or alkyl; Y = covalent bond, -CO-, -SO2-, >C:CHR or >C:NR, wherein R = H, CN or NO2; M independently = covalent bond, (un)substituted-alkyl, -(un)saturated carbocycle; L = H, alkyloxy, Ar3oxy, alkylamine, etc.; Ar1 = (un)substituted phenyl; Ar2 = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, aminocarbonyl, and alkyloxy; Ar3 = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, amino, alkyloxy, OH, pyridinyl, etc.; Het1 = monocyclic heterocyclic radical selected from pyrrolyl, pyrazolyl, imidazolyl, furanyl, etc.; m = 1 or 2 provided that if m = 2, then n = 1; n = 0-2; p = 1-2; q = 0-1] and their pharmaceutically acceptable salts having neurokinin antagonistic activity, in particular NK1 antagonistic activity, a combined NK1/NK3 antagonistic activity and a combined NK1/NK2/NK3 antagonistic activity, their preparation, compns. comprising them and their use as a medicine, in particular for the treatment of schizophrenia, emesis, anxiety and depression, irritable bowel syndrome (IBS), circadian rhythm disturbances, visceral pain, neurogenic inflammation, asthma, micturition disorders such as urinary incontinence and nociception are disclosed. Thus, e.g., II was prepared via reaction of (2R-trans)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-(1-piperazinyl)piperidine (preparation given) with 1-(phenylmethyl)-3-piperidinone. The receptor binding values (pIC50) for the h-NK1 ranges for all compds. according to the invention between 10 and 6. In view of their capability to antagonize the

actions of tachykinins by blocking the neurokinin receptors, and in particular antagonizing the actions of substance P, Neurokinin A and Neurokinin B by blocking the NK1, NK2 and NK3 receptors, the compds. according to the invention are useful as a medicine, in particular in the prophylactic and therapeutic treatment of tachykinin-mediated conditions, such as, for instance CNS disorders, in particular schizoaffective disorders, depression, anxiety disorders, stress-related disorders, sleep disorders, cognitive disorders, personality disorders, eating disorders, neurodegenerative diseases, addiction disorders, mood disorders, sexual dysfunction, pain and other CNS-related conditions; inflammation; allergic disorders; emesis; gastrointestinal disorders, in particular irritable bowel syndrome (IBS); skin disorders; vasospastic diseases; fibrosing and collagen diseases; disorders related to immune enhancement or suppression and rheumatic diseases and body weight control.

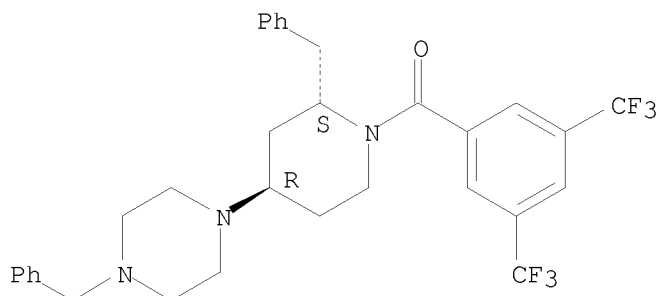
IT 190963-29-2P

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (stereoselective preparation of piperidinylpiperidinylpiperazines with tachykinin antagonist activity)

RN 190963-29-2 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



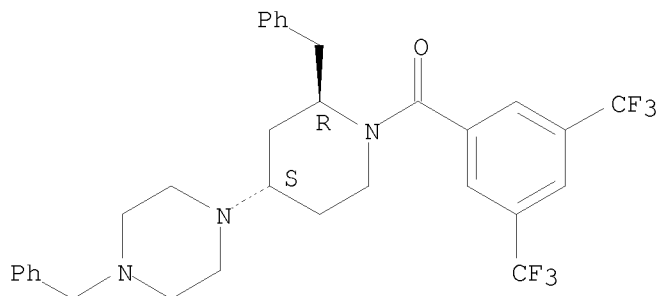
IT 681291-91-8P

RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (stereoselective preparation of piperidinylpiperidinylpiperazines with tachykinin antagonist activity)

RN 681291-91-8 HCAPLUS

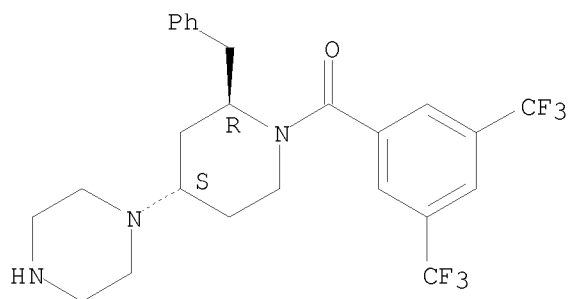
CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 681291-92-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (stereoselective preparation of piperidinylpiperidinylpiperazines with  
 tachykinin antagonist activity)  
 RN 681291-92-9 HCAPLUS  
 CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-(1-  
 piperazinyl)-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:546478 HCAPLUS

DOCUMENT NUMBER: 141:89116

TITLE: Preparation of substituted 1,4-di-piperidin-4-yl-piperazine derivatives and their use as tachykinin antagonists

INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria; De Boeck, Benoit Christian Albert Ghislain; Leenaerts, Joseph Elisabeth; Van Roosbroeck, Yves Emiel Maria

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004056772	A1	20040708	WO 2002-EP14836	20021223
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002368487	A1	20040714	AU 2002-368487	20021223
CA 2499903	A1	20040422	CA 2003-2499903	20031007
WO 2004033428	A1	20040422	WO 2003-EP50697	20031007
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,			

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 OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
 TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
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AU 2003282115	A1	20040504	AU 2003-282115	20031007
EP 1551804	A1	20050713	EP 2003-773731	20031007
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BR 2003015098	A	20050816	BR 2003-15098	20031007
CN 1703400	A	20051130	CN 2003-80101027	20031007
JP 2006510602	T	20060330	JP 2004-542503	20031007
NZ 539848	A	20060630	NZ 2003-539848	20031007
US 20060167008	A1	20060727	US 2005-527821	20050315
US 7410970	B2	20080812		
MX 2005PA03778	A	20050608	MX 2005-PA3778	20050408
NO 2005002192	A	20050504	NO 2005-2192	20050504
PRIORITY APPLN. INFO.:			WO 2002-EP11328	A 20021008
			WO 2002-EP14836	A 20021223
			WO 2003-EP50697	W 20031007
OTHER SOURCE(S):			MARPAT 141:89116	
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Tile compds. I [Q = O or NR<sub>3</sub>; X = covalent bond, -O-, -S-, or -NR<sub>3</sub>; R<sub>1</sub> independently = Ar<sub>1</sub>, Ar<sub>1</sub>-alkyl, and di(Ar<sub>1</sub>)-alkyl; R<sub>2</sub> = alkyl, Ar<sub>2</sub>, Ar<sub>2</sub>-alkyl, Het<sub>1</sub>, Het<sub>1</sub>-alkyl; R<sub>3</sub> independently = H or alkyl; Y = covalent bond, CO, SO<sub>2</sub>; M independently = covalent bond, (un)substituted-alkyl, -(un)saturated carbocycle; L = H, alkyloxy, Ar<sub>3</sub>oxy, alkylamine, etc.; Ar<sub>1</sub> = (un)substituted phenyl; Ar<sub>2</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, aminocarbonyl, and alkyloxy; Ar<sub>3</sub> = (un)substituted naphthalenyl or Ph with substituent(s) selected from halo, alkyl, CN, amino, alkyloxy, OH, pyridinyl, etc.; Het<sub>1</sub> = monocyclic heterocyclic radical selected from pyrrolyl, pyrazolyl, imidazolyl, furanyl, etc.; m = 1 or 2 provided that if m = 2, then n = 1; n = 0-2; p = 1-2; q = 0-1] and their pharmaceutically acceptable salts are disclosed as having tachykinin antagonistic activity, in particular NK<sub>1</sub> antagonistic activity. Their preparation, compns. comprising them and their use as a medicine, in particular for the treatment of emesis, anxiety, depression and irritable bowel syndrome (IBS) are disclosed. Thus, II was prepared via resolution of III (preparation given), de-N-benzylation, and reaction with 1-(phenylmethyl)-4-piperidinone. Selected compds. of the invention were evaluated for binding to h-NK<sub>1</sub>, h-NK<sub>2</sub>, and h-NK<sub>3</sub> receptors with all compds. showing (sub)nanomolar affinity for h-NK<sub>1</sub> with most possessing more than 100-fold selectivity towards the h-NK<sub>2</sub> and h-NK<sub>3</sub> receptors. In view of their capability to antagonize the actions of tachykinins by blocking the tachykinin receptors, and in particular antagonizing the actions of substance P by blocking the NK<sub>1</sub> receptor, the compds. according to the invention are useful as a medicine, in particular in the prophylactic and therapeutic treatment of tachykinin-mediated conditions, such as, for instance CNS disorders, in particular depression, anxiety disorders, stress-related disorders, sleep disorders, cognitive disorders, personality disorders, schizoaffective disorders, eating disorders, neurodegenerative diseases, addiction disorders, mood disorders, sexual dysfunction, pain and other CNS-related conditions; inflammation; allergic

disorders; emesis; gastrointestinal disorders, in particular IBS; skin disorders; vasospastic diseases; fibrosing and collagen diseases; disorders related to immune enhancement or suppression and rheumatic diseases and body weight control.

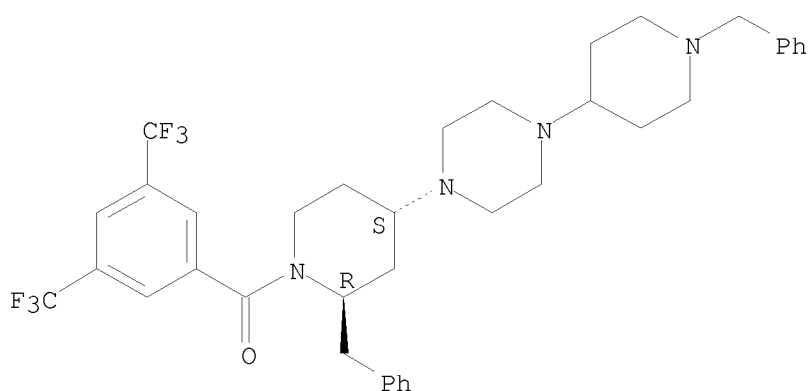
IT 681290-29-9P 681290-30-2P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(drug candidate; stereoselective preparation of 1,4-dipiperidin-4-ylpiperazines with tachykinin antagonist activity)

RN 681290-29-9 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-[1-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

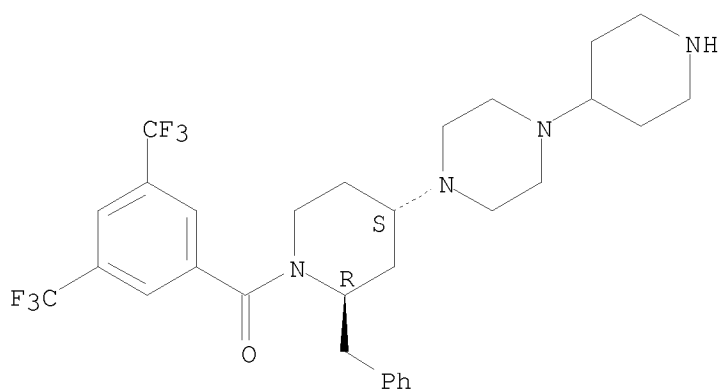
Absolute stereochemistry.



RN 681290-30-2 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(4-piperidinyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry.



IT 681290-31-3P 681290-32-4P 681290-33-5P  
681290-34-6P 681290-35-7P 681290-36-8P  
681290-37-9P 681290-40-4P 681290-41-5P  
681290-44-8P 681290-49-3P 681290-58-4P  
681290-62-0P 681290-65-3P 681290-67-5P  
681290-74-4P 681290-79-9P 681290-84-6P  
681290-86-8P 681290-87-9P 681290-96-0P

681290-99-3P 681291-06-5P 681291-18-9P  
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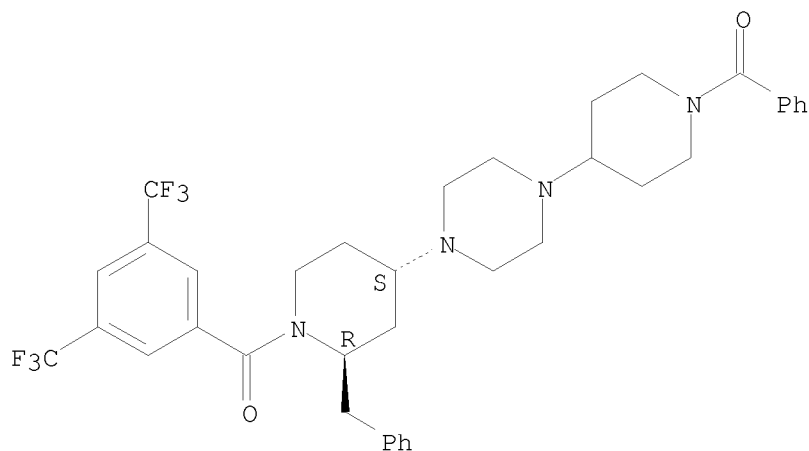
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(drug candidate; stereoselective preparation of 1,4-dipiperidin-4-  
ylpiperazines with tachykinin antagonist activity)

RN 681290-31-3 HCAPLUS

CN Piperidine, 4-[4-(1-benzoyl-4-piperidinyl)-1-piperazinyl]-1-[3,5-  
bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX  
NAME)

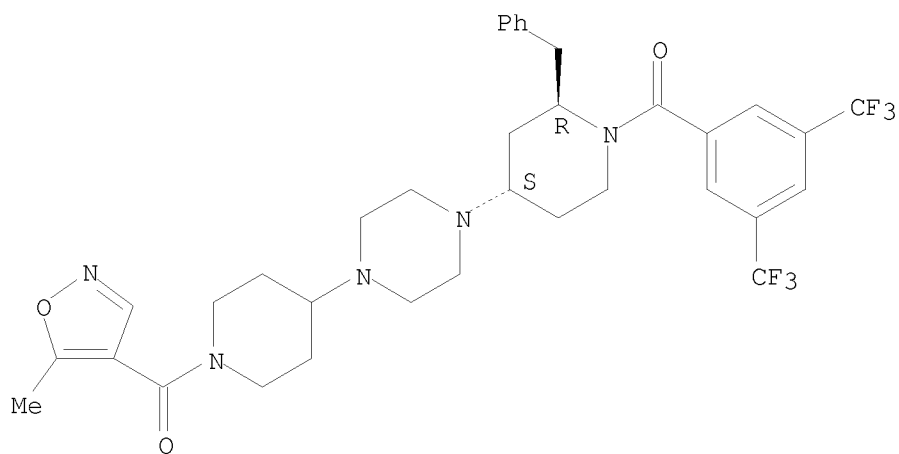
Absolute stereochemistry.



RN 681290-32-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[(5-methyl-4-  
isoxazolyl)carbonyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-,  
(2R,4S)- (9CI) (CA INDEX NAME)

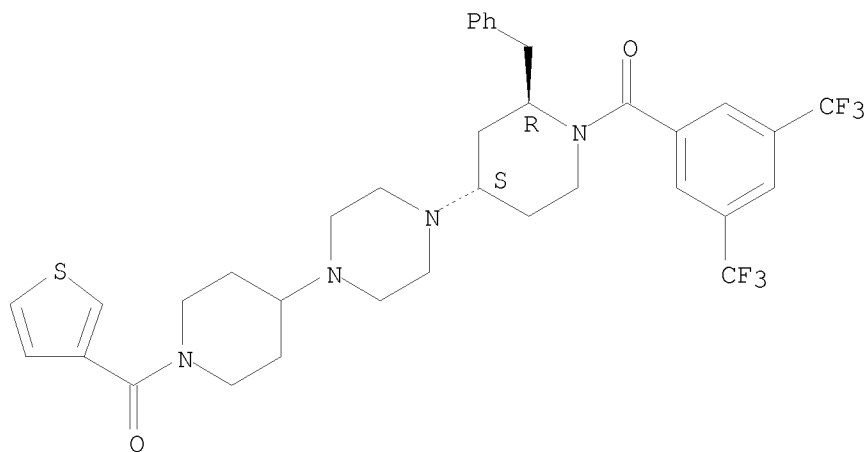
Absolute stereochemistry.



RN 681290-33-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-  
(3-thienylcarbonyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA  
INDEX NAME)

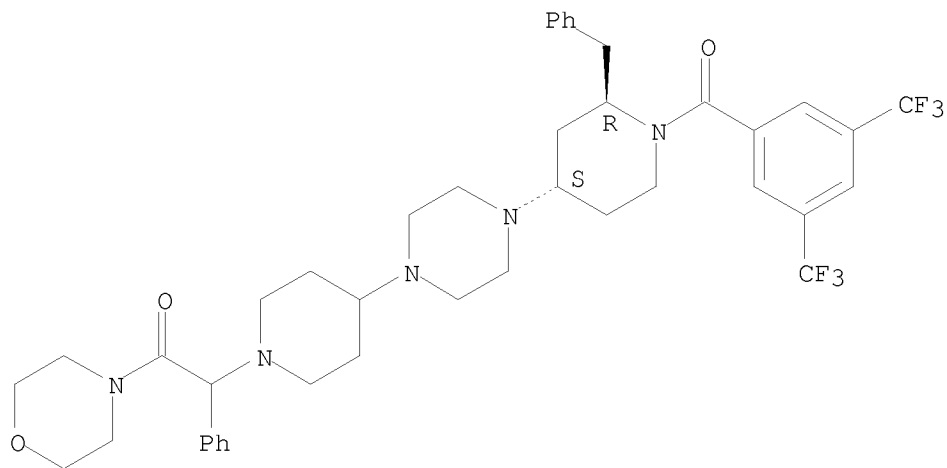
Absolute stereochemistry.



RN 681290-34-6 HCAPLUS

CN Ethanone, 2-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyloxy]-1-piperazinyl]-1-piperidinyloxy]-1-(4-morpholinyl)-2-phenyl- (CA INDEX NAME)

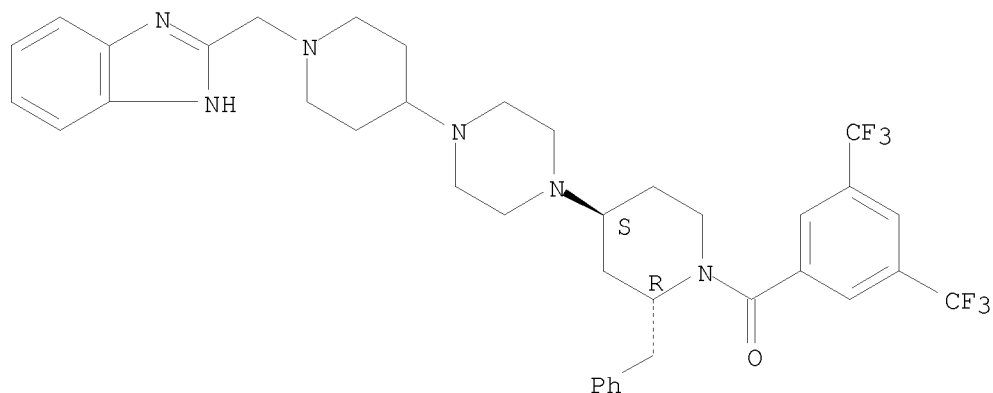
Absolute stereochemistry.



RN 681290-35-7 HCAPLUS

CN Methanone, [(2R,4S)-4-[4-[1-(1H-benzimidazol-2-ylmethyl)-4-piperidinyloxy]-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyloxy][3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

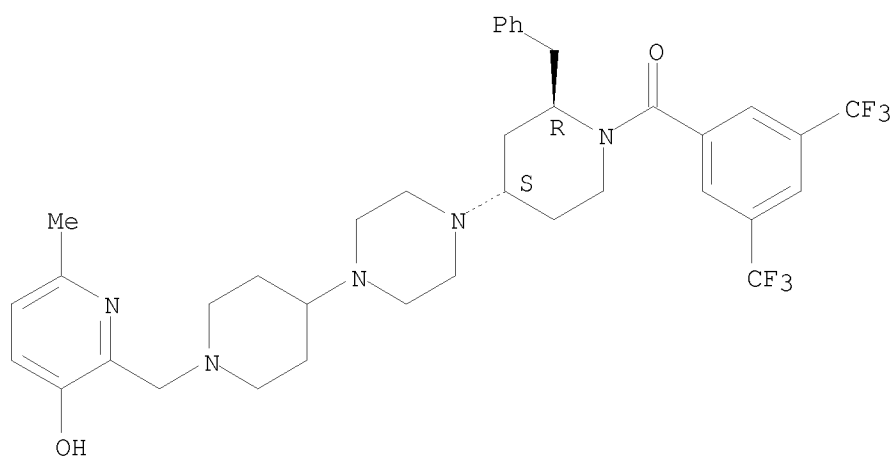
Absolute stereochemistry.



RN 681290-36-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-4-[4-[1-[(3-hydroxy-6-methyl-2-pyridinyl)methyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl]- (CA INDEX NAME)

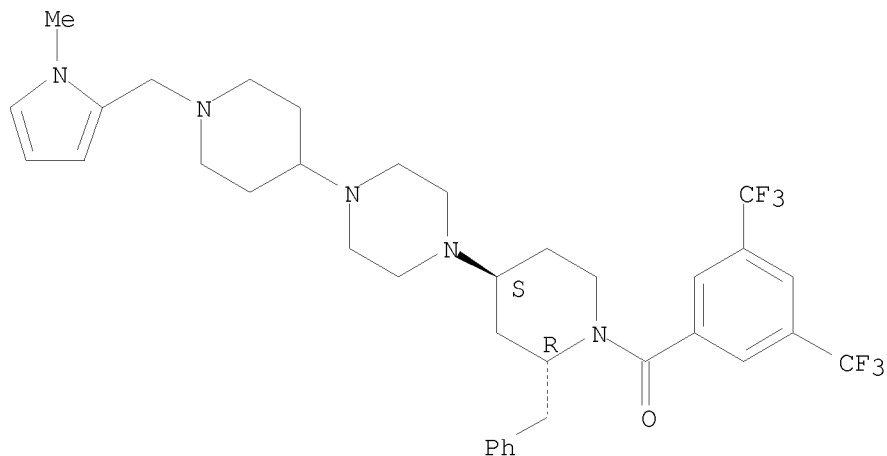
Absolute stereochemistry.



RN 681290-37-9 HCAPLUS

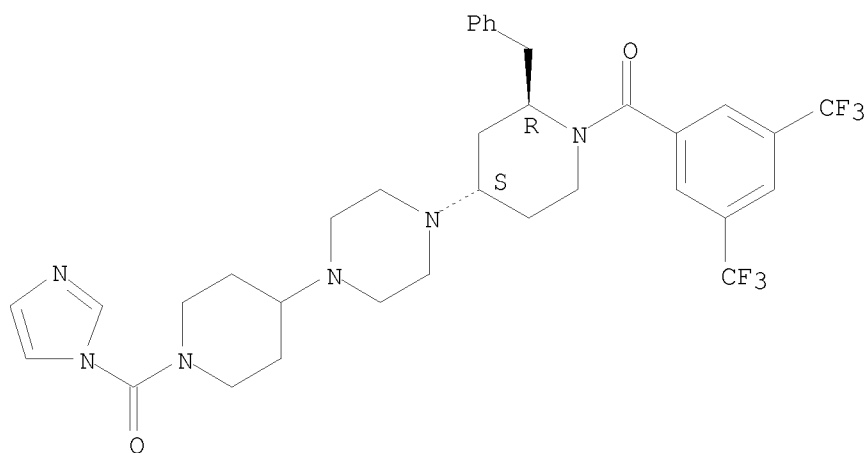
CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-4-[4-[1-[(1-methyl-1H-pyrrol-2-yl)methyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry.



RN 681290-40-4 HCAPLUS  
 CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(1H-imidazol-1-yl)carbonyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

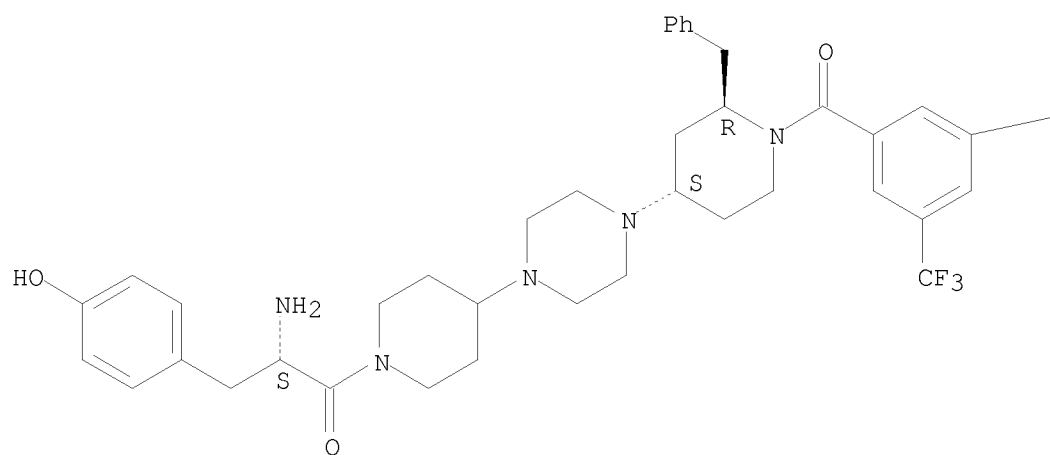
Absolute stereochemistry.



RN 681290-41-5 HCAPLUS  
 CN 1-Propanone, 2-amino-1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-3-(4-hydroxyphenyl)-, hydrochloride (1:3), (2S)- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



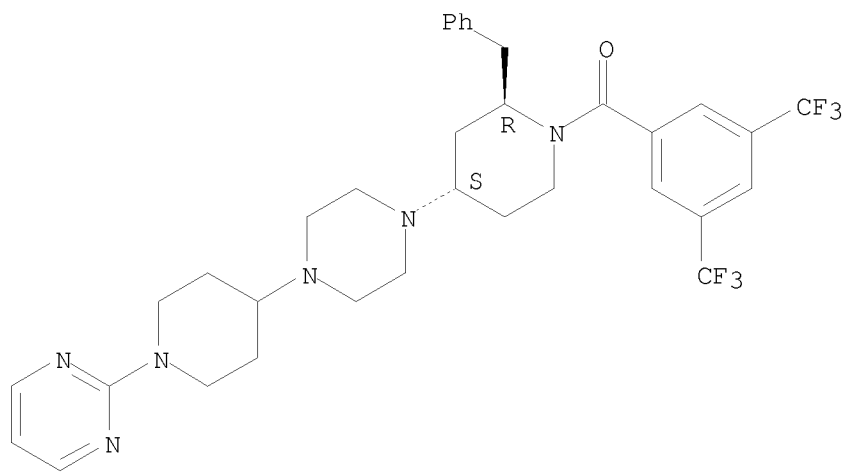
● 3 HCl

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—CF<sub>3</sub>

RN 681290-44-8 HCAPLUS  
 CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-[1-(2-pyrimidinyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

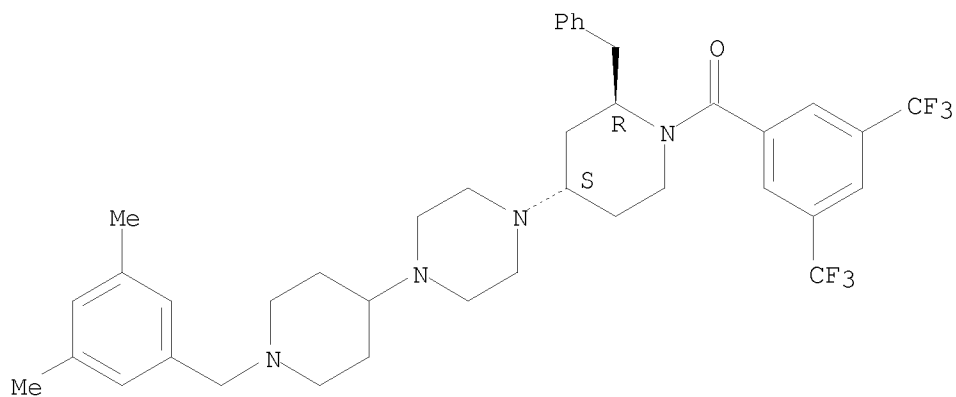
Absolute stereochemistry.



RN 681290-49-3 HCAPLUS  
 CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-4-[4-[1-[(3,5-

dimethylphenyl)methyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-1-piperidinyl]- (CA INDEX NAME)

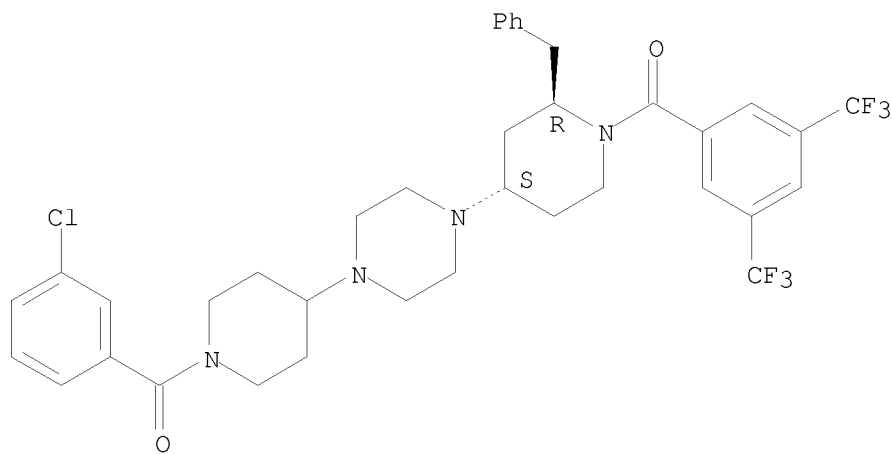
Absolute stereochemistry.



RN 681290-58-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3-chlorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

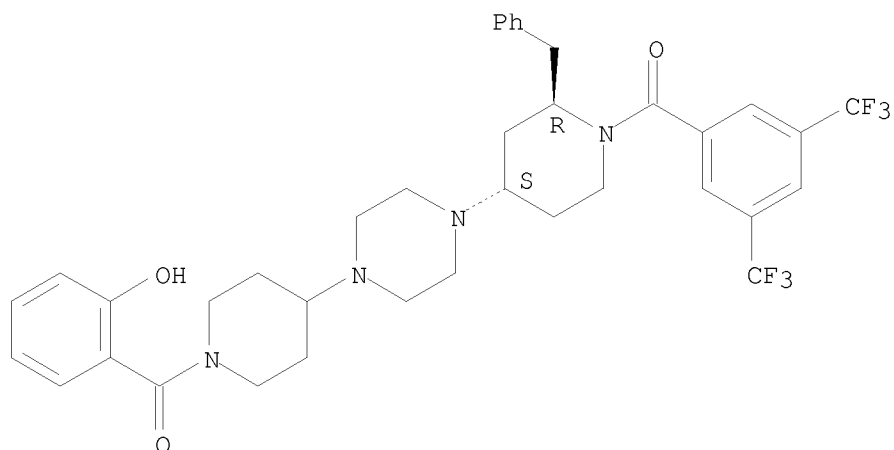
Absolute stereochemistry.



RN 681290-62-0 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxybenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

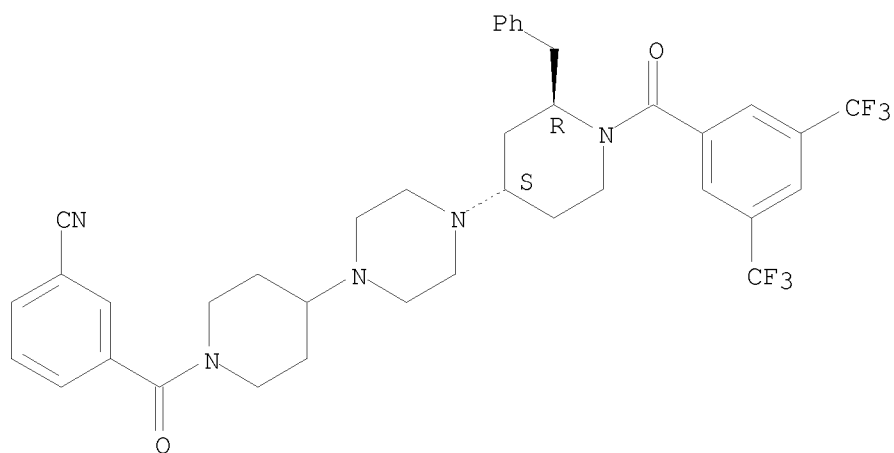
Absolute stereochemistry.



RN 681290-65-3 HCAPLUS

CN Benzonitrile, 3-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]- (CA INDEX NAME)

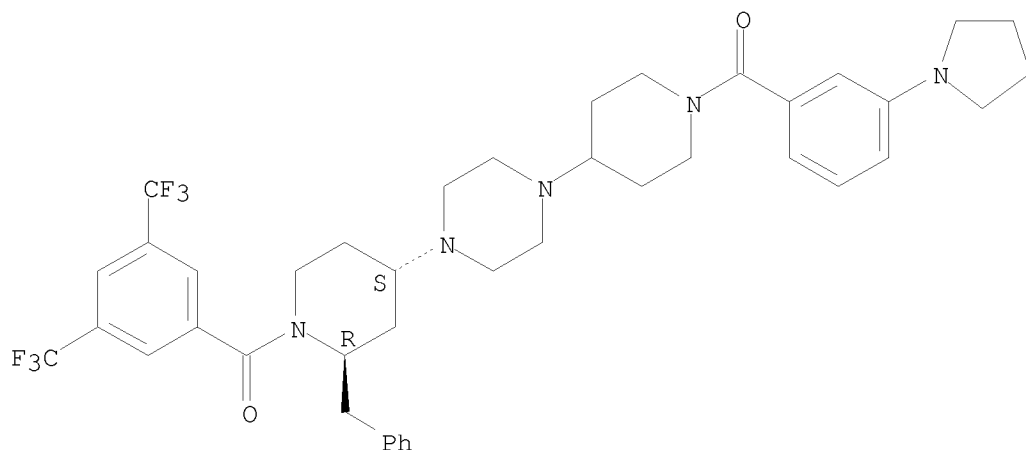
Absolute stereochemistry.



RN 681290-67-5 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-[3-(1-pyrrolidinyl)benzoyl]-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

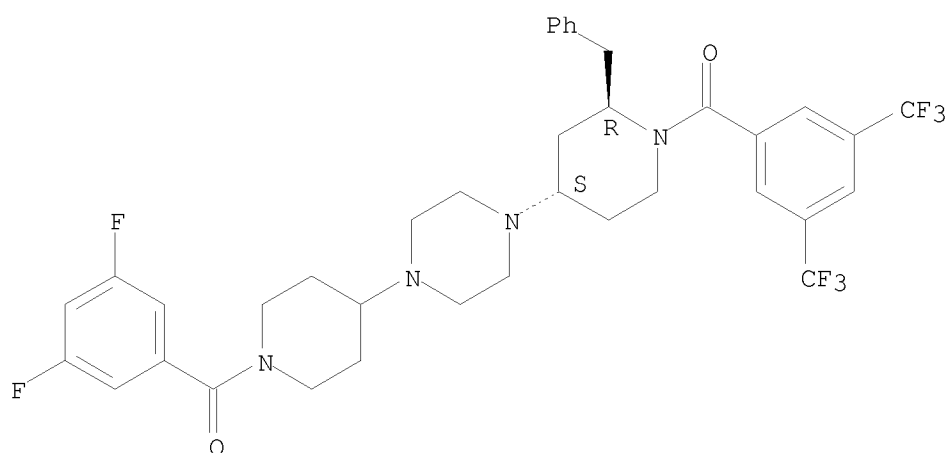
Absolute stereochemistry.



RN 681290-74-4 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(3,5-difluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

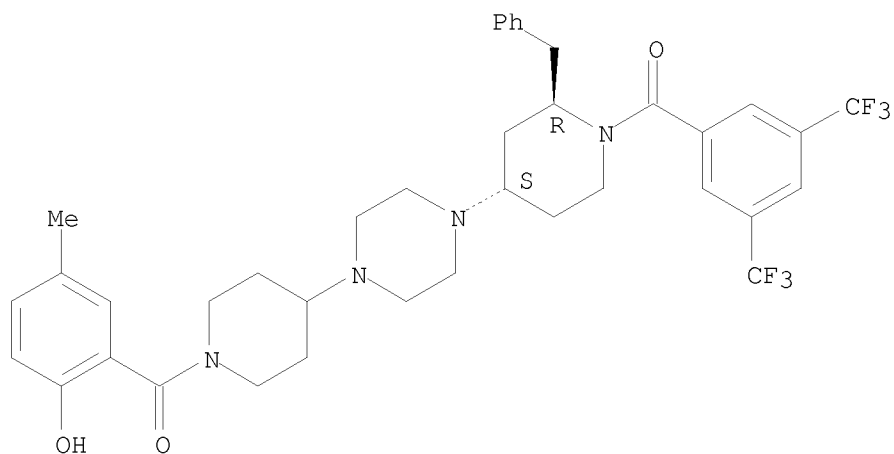
Absolute stereochemistry.



RN 681290-79-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(2-hydroxy-5-methylbenzoyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

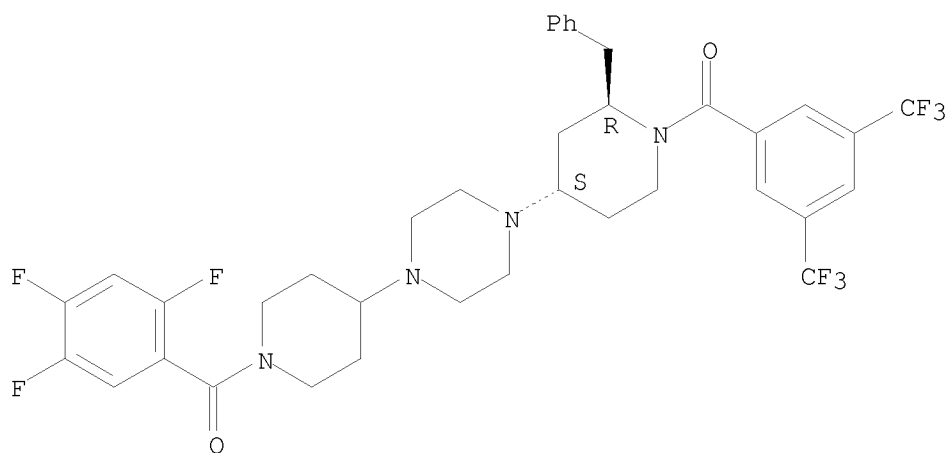
Absolute stereochemistry.



RN 681290-84-6 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(2,4,5-trifluorobenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

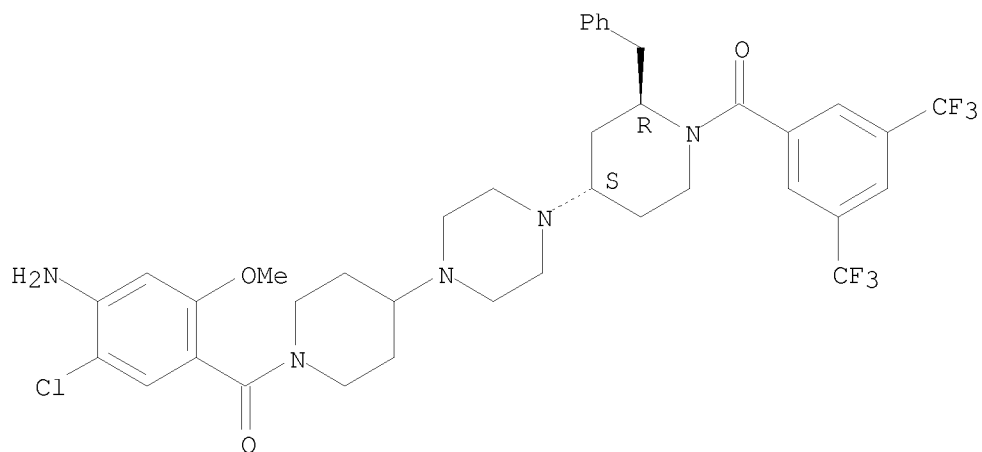
Absolute stereochemistry.



RN 681290-86-8 HCAPLUS

CN Piperidine, 4-[4-[1-(4-amino-5-chloro-2-methoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

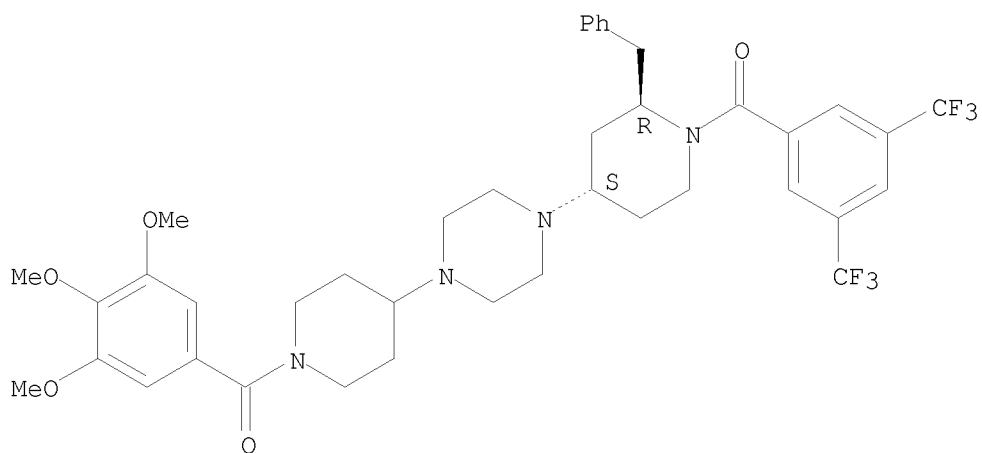
Absolute stereochemistry.



RN 681290-87-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3,4,5-trimethoxybenzoyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

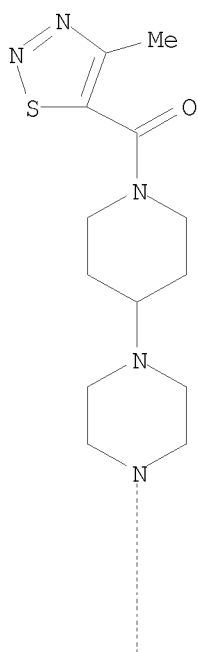


RN 681290-96-0 HCAPLUS

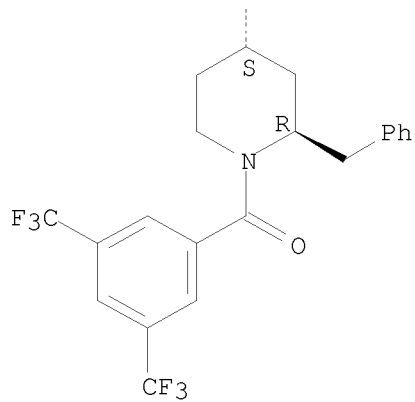
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(4-methyl-1,2,3-thiadiazol-5-yl)carbonyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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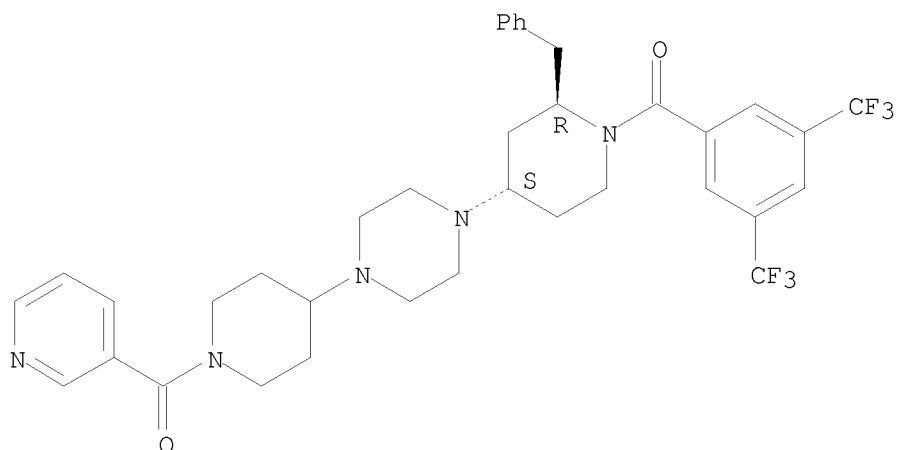


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RN 681290-99-3 HCAPLUS  
CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-[4-[1-(3-pyridinylcarbonyl)-4-piperidinyl]-1-piperazinyl]-, (2R,4S)- (9CI) (CA INDEX NAME)

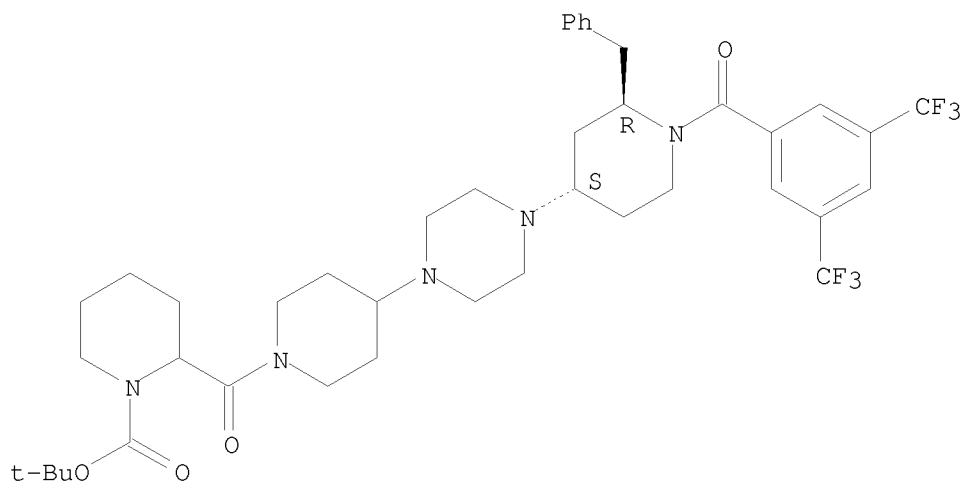
Absolute stereochemistry.



RN 681291-06-5 HCAPLUS

CN 1-Piperidinecarboxylic acid, 2-[[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]carbonyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

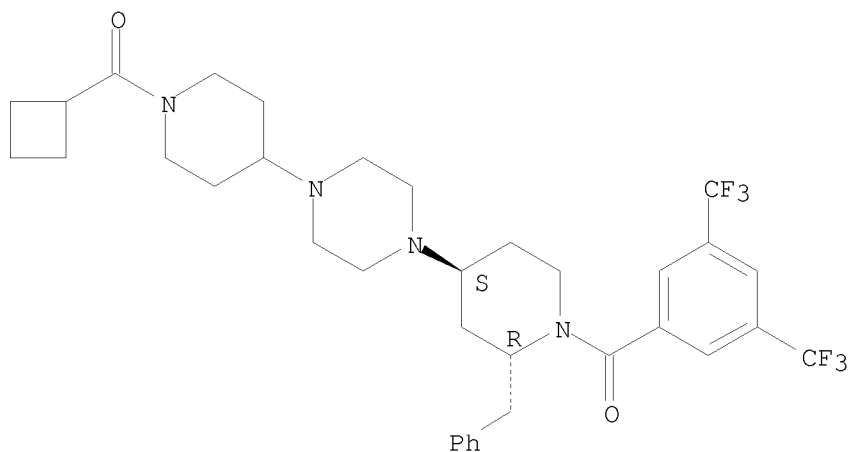
Absolute stereochemistry.



RN 681291-18-9 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-(cyclobutylcarbonyl)-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, (2R,4S)- (9CI) (CA INDEX NAME)

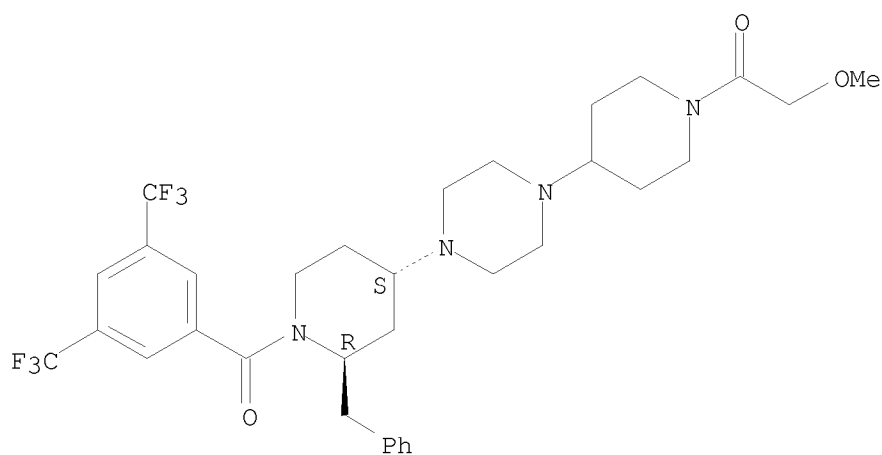
Absolute stereochemistry.



RN 681291-20-3 HCAPLUS

CN Ethanone, 1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-2-methoxy-  
(CA INDEX NAME)

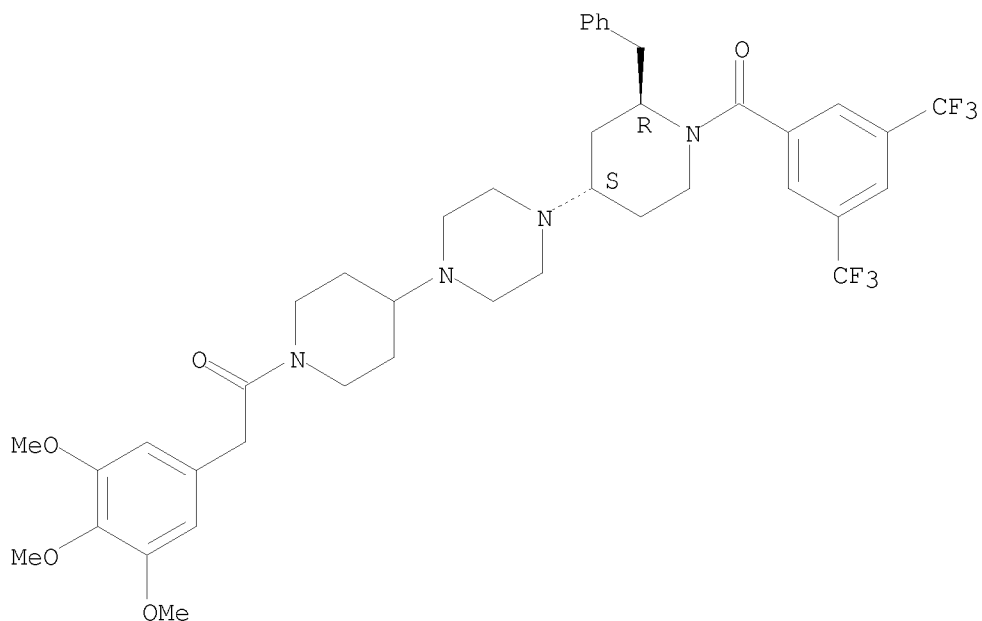
Absolute stereochemistry.



RN 681291-22-5 HCAPLUS

CN Ethanone, 1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)

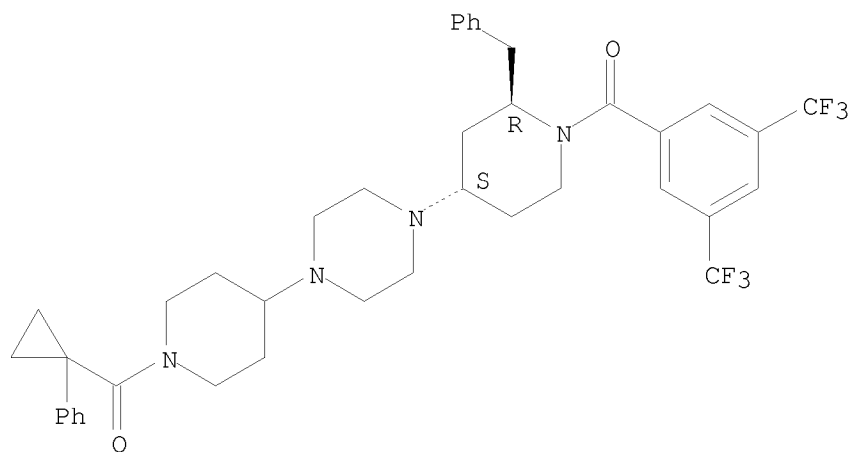
Absolute stereochemistry.



RN 681291-24-7 HCAPLUS

CN Piperidine, 1-[3,5-bis(trifluoromethyl)benzoyl]-4-[4-[1-[(1-phenylcyclopropyl)carbonyl]-4-piperidinyl]-1-piperazinyl]-2-(phenylmethyl)-, dihydrochloride, (2R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



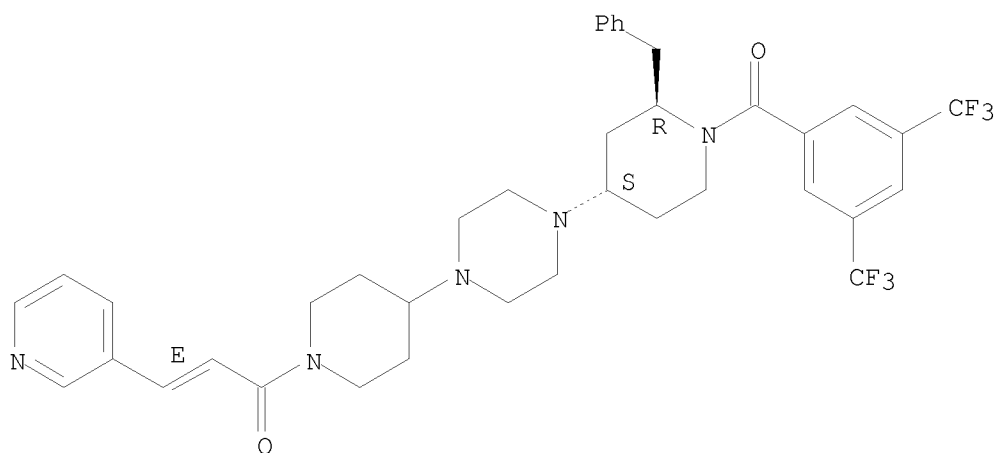
● 2 HCl

RN 681291-26-9 HCAPLUS

CN 2-Propen-1-one, 1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-3-(3-pyridinyl)-, (2E)- (CA INDEX NAME)

Absolute stereochemistry.

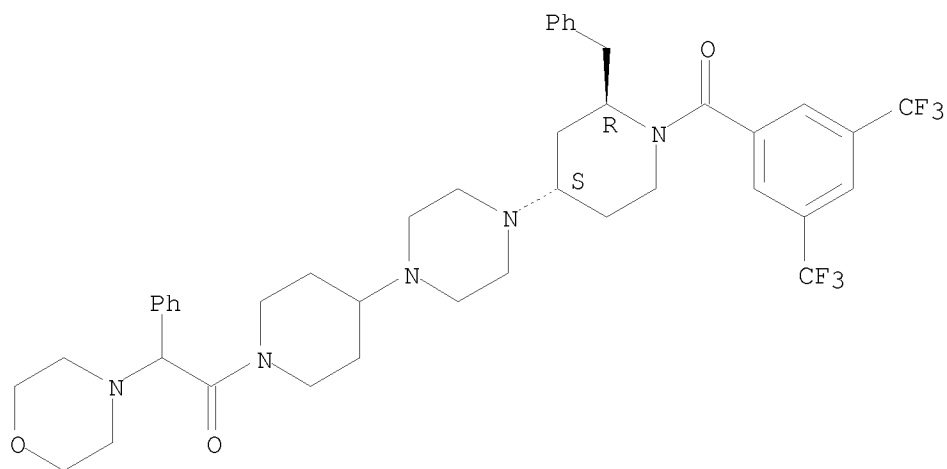
Double bond geometry as shown.



RN 681291-31-6 HCAPLUS

CN Ethanone, 1-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-2-(4-morpholinyl)-2-phenyl- (CA INDEX NAME)

Absolute stereochemistry.



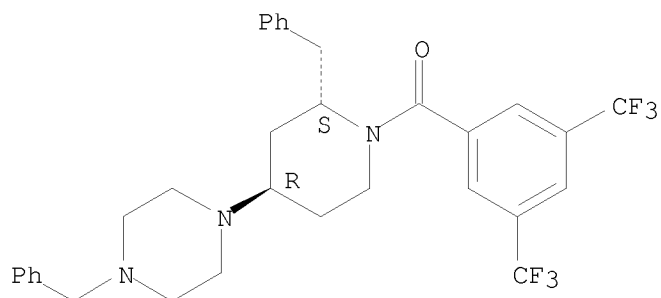
IT 190963-29-2P

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (intermediate; stereoselective preparation of 1,4-dipiperidin-4-ylpiperazines with tachykinin antagonist activity)

RN 190963-29-2 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



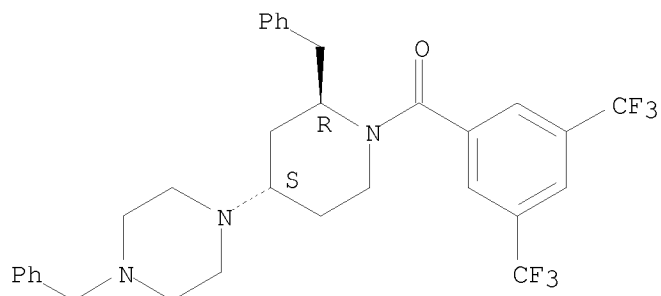
IT 681291-91-8P

RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; stereoselective preparation of 1,4-dipiperidin-4-ylpiperazines with tachykinin antagonist activity)

RN 681291-91-8 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



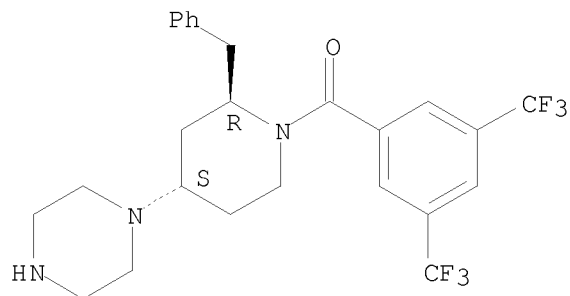
IT 681291-92-9P 681291-93-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; stereoselective preparation of 1,4-dipiperidin-4-ylpiperazines with tachykinin antagonist activity)

RN 681291-92-9 HCAPLUS

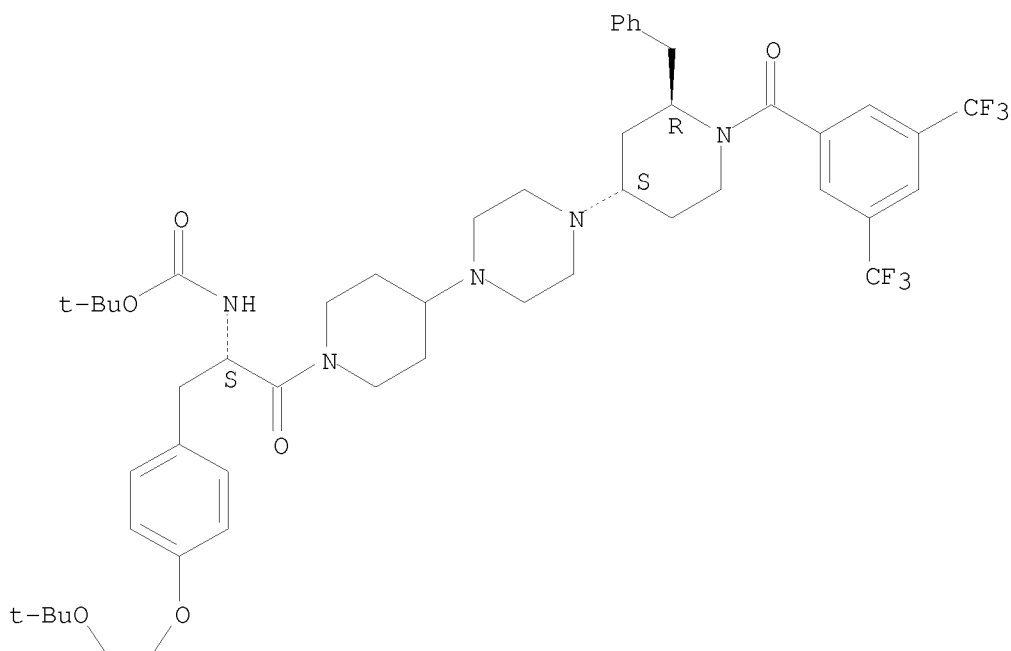
CN Methanone, [3,5-bis(trifluoromethyl)phenyl] [(2R,4S)-2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

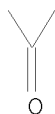


CN Carbonic acid, 4-[(2S)-3-[4-[4-[(2R,4S)-1-[3,5-bis(trifluoromethyl)benzoyl]-2-(phenylmethyl)-4-piperidinyl]-1-piperazinyl]-1-piperidinyl]-2-[[1,1-dimethylethoxy)carbonyl]amino]-3-oxopropyl]phenyl 1,1-dimethylethyl ester (CA INDEX NAME)

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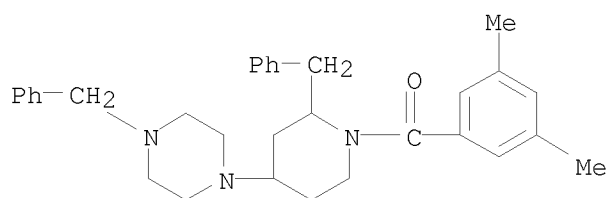


PAGE 2-A



RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(stereoselective preparation of 1,4-dipiperidin-4-ylpiperazines with tachykinin antagonist activity)

CN Methanone, (3,5-dimethylphenyl)[2-(phenylmethyl)-4-[4-(phenylmethyl)-1-piperazinyl]-1-piperidinyl]- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:154466 HCAPLUS

DOCUMENT NUMBER: 140:199910

TITLE: Palladium complex catalyst composition and manufacture of polyketone using the catalyst

INVENTOR(S): Watanabe, Tomoya; Komatsu, Takashi

PATENT ASSIGNEE(S): Asahi Kasei Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004059731	A	20040226	JP 2002-219818	20020729
PRIORITY APPLN. INFO.:			JP 2002-219818	20020729

AB The composition is that obtained by reaction of (a) a Pd compound adsorbed on or

supported by a random, block, or alternating copolymer as carrier  
R1[C(O)CH2CH2]n[C(O)CHR3CHR4]mR2 [R1 = H, OH, C1-12 alkoxy, e.g., MeO, EtO, PrO, isopropoxy, BuO, tert-BuO, cyclopentoxy, cyclhexyloxy, PhO, etc.; R2 = H, OH, C1-12 alkoxycarbonyl RO(CO), e.g., methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl, isopropoxycarbonyl, butoxycarbonyl, tert-butoxycarbonyl, cyclopentoxycarbonyl, cyclohexyloxycarbonyl, phenoxy carbonyl; R3, R4 = H, C1-12 hydrocarbonyl; n > 0, m ≥ 0], (b) bidentate ligand having Group 15 metal, and (c) an anion of an acid with pKa ≤ 4. The polyketone is manufactured by polymerization of CO and an ethylenic unsatd. compound in the presence of the catalyst composition, wherein recovery of the catalyst after polymerization is not required. Thus, 0.07 g Pd acetate in Me2CO, 0.097 g 1,3-bis(dipheylphosphino)propane in MeOH, and 0.1 g CO-ethylene copolymer were mixed to give a supported catalyst slurry, which was mixed with 1,3-bis[di(2-methoxyphenyl)phosphino]propane, H2SO4, and 1,4-benzoquinone to give the catalyst composition. Then, CO and ethylene were polymerized in the presence of the composition to show addition

of only

3% of the resulted polymer on the reactor.

IT 6737-42-4DP, 1,3-Bis(diphenylphosphino)propane, complex with palladium

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(composition of palladium complex polymerization catalyst supported on polymer for

manufacture of polyketone)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P-(CH2)3-PPh2

L14 ANSWER 13 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:683449 HCAPLUS

DOCUMENT NUMBER: 139:329460

TITLE: Electrochemical carbonylation of primary amines to symmetrical N,N'-disubstituted ureas using

palladium(II) catalyst in combination with its anodic recycling

AUTHOR(S): Chiarotto, Isabella; Feroci, Marta

CORPORATE SOURCE: Universita degli Studi "La Sapienza", Dipartimento di Ingegneria Chimica dei Materiali delle Materie Prime e Metallurgia, Rome, I-00161, Italy

SOURCE: Proceedings - Electrochemical Society (2002), 2002-10(Organic Electrochemistry), 33-35  
CODEN: PESODO; ISSN: 0161-6374

PUBLISHER: Electrochemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new procedure for an efficient synthesis of N,N'-disubstituted ureas was developed. Aromatic and aliphatic primary amines undergo oxidative carbonylation under atmospheric pressure of CO, using Pd(II) catalyst in combination with its anodic recycling at a graphite electrode.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, palladium complex

RL: CAT (Catalyst use); USES (Uses)  
(catalyst in preparation of dibenzylurea by electrochem. carbonylation of benzylamine)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 14 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:587513 HCAPLUS

DOCUMENT NUMBER: 135:303951

TITLE: Supported organometallic complexes. XXV. Accessibility and solid state NMR studies on sol-gel processed diphosphine ligands

AUTHOR(S): Lindner, Ekkehard; Brugger, Stefan; Steinbrecher, Stefan; Plies, Erich; Mayer, Hermann A.

CORPORATE SOURCE: Institut fur Anorganische Chemie II, Universitat Tubingen, Tubingen, D-72076, Germany

SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (2001), 627(8), 1731-1740  
CODEN: ZAACAB; ISSN: 0044-2313

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:303951

AB Novel xerogels X1a-d were obtained by sol-gel processing of the monomeric T-functionalized diphosphine ligand (MeO)<sub>3</sub>Si(CH<sub>2</sub>)<sub>6</sub>Ch[CH<sub>2</sub>PPh<sub>2</sub>]<sub>2</sub> [1(T0)] with various amts. of the co-condensing agents MeSi(OMe)<sub>2</sub>(CH<sub>2</sub>)<sub>6</sub>(OMe)<sub>2</sub>SiMe (D-0C6D0) and MeSi(OMe)<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>(C<sub>6</sub>H<sub>4</sub>)(CH<sub>2</sub>)<sub>3</sub>(OMe)<sub>2</sub>SiMe [Ph(1,4-C<sub>3</sub>D<sub>0</sub>)<sub>2</sub>]. <sup>29</sup>Si CP/MAS NMR spectroscopic investigations were applied to probe the matrixes and their degree of condensation. The integrity of the hydrocarbon backbone and diphosphine moiety was examined by solid state NMR spectroscopy (<sup>13</sup>C, <sup>31</sup>P). To study the dynamics of the matrixes and the phosphorus centers detailed measurements of relaxation time (T<sub>1</sub>ρH) and cross polarization consts. (TSiH, TPH) were carried out. The accessibility of the polysiloxane-supported diphosphines was scrutinized by some typical phosphine reactions. It was found that reagents such as H<sub>2</sub>O<sub>2</sub>, MeI as well as bulky mols. like (NBD)Mo(CO)<sub>4</sub> or (COD)PdCl<sub>2</sub> are able to reach all phosphorus centers independent on the kind of the backbone of the matrix. SEM micrographs show the morphol. of the hybrid materials and

energy dispersive x-ray spectroscopy (EDX) suggest that the distribution of the elements agree with the applied composition

IT 6737-42-4DP, xerogel-supported  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation, solid state NMR, oxidation, thionation, or complexation reactions of)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 15 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:231396 HCAPLUS  
DOCUMENT NUMBER: 135:19929  
TITLE: Kinetic studies of migratory insertion reactions at the (1,3-bis(diphenylphosphino)propane)Pd(II) center and their relationship to the alternating copolymerization of ethylene and carbon monoxide

AUTHOR(S): Bianchini, Claudio  
CORPORATE SOURCE: ISSECC-CNR, Florence, Italy  
SOURCE: Chemtracts (2001), 14(1), 30-33  
CODEN: CHEMFW; ISSN: 1431-9268

PUBLISHER: Data Trace Publishing Co.  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English

AB The title research of C. S. Shultz, et al., on the kinetics of ethylene-CO alternating polymerization using 1,3-bis(diphenylphosphino)propane Pd(II) complex catalysts, is reviewed with commentary and 9 refs.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, palladium complexes  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(kinetics and mechanism of ethylene-CO alternating polymerization using bis(diphenylphosphino)propane Pd complex catalysts)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 16 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:67965 HCAPLUS  
DOCUMENT NUMBER: 134:280376  
TITLE: Efficient catalytic isomerization of allylic alcohols to carbonyl compounds with water soluble rhodium complexes

AUTHOR(S): De Bellefon, Claude; Caravieilhès, Sylvain; Kuntz, Emile G.  
CORPORATE SOURCE: Laboratoire de Genie des Procèdes Catalytique, URA 2211 CNRS and CPE Lyon, Villeurbanne, 69616, Fr.  
SOURCE: Comptes Rendus de l'Académie des Sciences, Serie IIc:

Chimie (2000), 3(7), 607-614  
CODEN: CASCEN; ISSN: 1387-1609  
PUBLISHER: Editions Scientifiques et Medicales Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 134:280376

AB The isomerization of allylic alcs. to carbonyl compds. catalyzed by water soluble transition metal complexes of Rh, Ru and Pd in a water/heptane biphasic system is reported. The substrates investigated are secondary or primary alcs. bearing the C-C bond in the terminal or inner position. Conversions into carbonyl compds. were quant. except for geraniol (44% yield of citronellal). Activities up to 2500 h<sup>-1</sup> and turnover nos. of more than 2600 are reported. The differences in the observed reactivity within a family of C<sub>4</sub>-C<sub>8</sub> homologous allylic alcs. is only related to thermodyn. parameters such as the solubility and L/L partition dictated by the hydrocarbon chain and not by their intrinsic reactivity.

IT 6737-42-4DP, 1,3-Bis(diphenylphosphino)propane, sulfonated  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)

(preparation of aldehydes or ketones by water-soluble rhodium complex-catalyzed isomerization of allylic alcs.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 17 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:496332 HCAPLUS

DOCUMENT NUMBER: 133:296001

TITLE: Hydroformylation of epoxides catalyzed by cobalt and hemilabile P-O ligands

AUTHOR(S): Weber, R.; Keim, W.; Mothrath, M.; Englert, U.;  
Ganter, B.

CORPORATE SOURCE: Inst. Tech. Macromol. Chem., RWTH Aachen, Aachen,  
52074, Germany

SOURCE: Chemical Communications (Cambridge) (2000), (15),  
1419-1420

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:296001

AB Complexes of Co efficiently catalyze the hydroformylation of epoxides in the presence of hemilabile P-O chelating ligands to give β-hydroxyaldehydes in high selectivities and yields.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, cobalt carbonyl complexes

RL: CAT (Catalyst use); USES (Uses)

(cobalt phosphine oxide complexes as hydroformylation catalysts for epoxides)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 18 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:231767 HCAPLUS

DOCUMENT NUMBER: 132:334925

TITLE: Ligand and anion effects of palladium catalyst for CO/ethylene copolymerization

AUTHOR(S): Luo, Hekuan; Li, Dagang; Kou, Yuan

CORPORATE SOURCE: Beijing Research Institute of Chemical Industry, Beijing, 100013, Peop. Rep. China

SOURCE: Wuli Huaxue Xuebao (2000), 16(3), 273-277

CODEN: WHXUEU; ISSN: 1000-6818

PUBLISHER: Beijing Daxue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Six complexes of two series were studied as the catalyst precursors for CO/ethylene copolymerization by using catalytic evaluation method and EXAFS technique. The first series of the complexes has general formula (L)Pd(OCOCF<sub>3</sub>)<sub>2</sub> in which L is DPPPr, DPPBu or DPPEt. The second series of the complexes has general formula (DPPPr)Pd(A)<sub>2</sub> in which A<sup>-</sup> is CF<sub>3</sub>COO<sup>-</sup>, P-CH<sub>3</sub>PhSO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup> or CH<sub>3</sub>COO<sup>-</sup>. The results showed that suitable ligands have relatively strong coordination ability to palladium(II) center. Suitable anions belonging to strong acids, have excellent stability on cationic palladium(II), and easy to leave away to give coordination vacant to comonomers.

IT 6737-42-4DP, 1,3-Bis(diphenylphosphino)propane, complex with palladium trifluoroacetate

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);

USES (Uses)

(preparation of palladium trifluoroacetate complex catalyst for CO/ethylene copolymerization.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 19 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:113733 HCAPLUS

DOCUMENT NUMBER: 132:209424

TITLE: The oxo-synthesis catalyzed by cationic palladium complexes, selectivity control by neutral ligand and anion

AUTHOR(S): Drent, E.; Budzelaar, P. H. M.

CORPORATE SOURCE: Shell Research and Technology Centre, Amsterdam, NL-1031 CM, Neth.

SOURCE: Journal of Organometallic Chemistry (2000), 593-594, 211-225

CODEN: JORCAI; ISSN: 0022-328X

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Catalyst systems consisting of a palladium(II) diphosphine complex with weakly or non-coordinating counterions are efficient catalysts for the hydrocarbonylation of both aliphatic and functionalized olefins. Moreover, variations of ligand, anion and/or solvent can be used to steer the reaction towards alcs., aldehydes, ketones or oligoketones.

Non-coordinating anions and arylphosphine ligands produce primarily

(oligo)ketones; increasing ligand basicity or anion coordination strength shifts selectivity towards aldehydes and alcs. For the mechanisms of the aldehyde-producing step, we propose heterolytic dihydrogen cleavage, assisted by the anion. At high electrophilicity of the palladium center, selective ketone formation is observed. The reactions described here constitute the first examples of selective formation of ketones by hydrocarbonylation of higher olefins.

IT 6737-42-4D, palladium complexes  
RL: CAT (Catalyst use); USES (Uses)  
(the oxo-synthesis catalyzed by cationic palladium complexes,  
selectivity control by neutral ligand and anion)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 20 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:97812 HCAPLUS

DOCUMENT NUMBER: 132:237458

TITLE: Synthesis and properties of copolymers of  
ethylene/carbon monoxide with styrene/carbon monoxide

AUTHOR(S): Kacker, Smita; Sissano, J. A.; Schulz, Donald N.

CORPORATE SOURCE: Corporate Research Laboratory, Exxon Research and  
Engineering Company, Annandale, NJ, 08801, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry  
(2000), 38(4), 752-757  
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The terpolymn. of ethylene, styrene, and carbon monoxide was prepared using  
two different palladium-based catalysts, i.e., a phosphine-based ligand  
system and a nitrogen-based ligand system. The range of possible compns.  
and the composition dependence of the properties of the resulting polymers were  
determined. These polymers were essentially carbon monoxide versions of the  
ethylene styrene interpolymers recently presented by Dow. A comparison  
between the two families of polymers is attempted. Some copolymers showed  
extremely high elongation (≤270%).

IT 6737-42-4DP, DPPP, palladium complexes

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(effect of palladium complex polymerization catalysts on synthesis and  
properties of ethylene-carbon monoxide-styrene copolymers)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 21 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

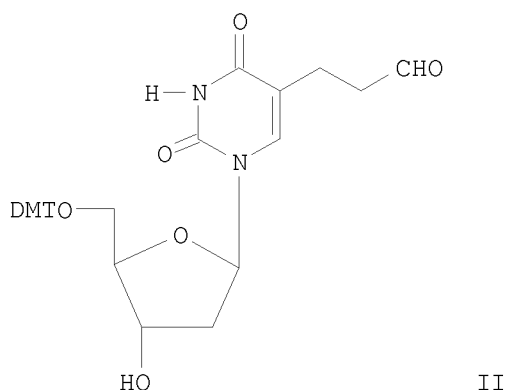
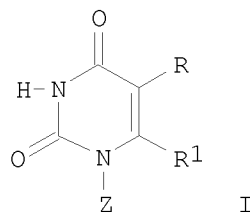
ACCESSION NUMBER: 2000:76973 HCAPLUS

DOCUMENT NUMBER: 132:108227

TITLE: Nucleoside modifications by palladium catalyzed  
methods as potential antivirals, antibacterials,

antifungals, and antineoplastics  
 INVENTOR(S): Beckvermit, Jeffrey T.; Tu, Chi  
 PATENT ASSIGNEE(S): Nexstar Pharmaceuticals, Inc., USA  
 SOURCE: U.S., 14 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6020483	A	20000201	US 1998-160747	19980925
WO 2000018780	A1	20000406	WO 1999-US19380	19990820
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9956906	A1	20000417	AU 1999-56906	19990820
US 6355787	B1	20020312	US 2000-495429	20000131
US 20020103367	A1	20020801	US 2002-47786	20020115
US 6512106	B2	20030128		
US 20040034212	A1	20040219	US 2003-351468	20030124
US 6846918	B2	20050125		
PRIORITY APPLN. INFO.:			US 1998-160747	A 19980925
			WO 1999-US19380	W 19990820
			US 2000-495429	A1 20000131
			US 2002-47786	A1 20020115
OTHER SOURCE(S):			CASREACT 132:108227; MARPAT 132:108227	
GI				



AB This invention discloses a method for the preparation of 2'-modified nucleosides I (Z = H, sugar residue; R = H, R1 = CH<sub>2</sub>(CH<sub>2</sub>)<sub>n+1</sub>COR<sub>3</sub>; R1 = CH<sub>2</sub>(CH<sub>2</sub>)<sub>n+1</sub>COR<sub>3</sub>, R2 = H; R3 = H, alkyl, alkenyl, aryl, n = 0-15), using a palladium catalyst and an alkene functionalized with a heteroatom. Included in the invention are the novel pyrimidines and purines that can be prepared according to the method of the invention and oligonucleotides

containing said modified pyrimidines and purines. Thus, nucleoside II was prepared via palladium-catalyzed coupling of nucleoside with allyl alc. These nucleosides were prepared as potential antivirals, antibacterials, antifungals, and antineoplastics (no data).

IT 6737-42-4D, reaction products with palladium  
RL: CAT (Catalyst use); USES (Uses)  
(nucleoside modifications by palladium catalyzed methods as potential antivirals antibacterials antifungals and antineoplastics)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 22 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:13440 HCAPLUS

DOCUMENT NUMBER: 132:230987

TITLE: The insertion of sulfur dioxide into palladium-methyl bonds: the synthesis and x-ray crystal structure of an unusual [(dppp)PdOS(Me)O]<sub>2</sub>[BAr'<sub>4</sub>]<sub>2</sub> dimer

AUTHOR(S): Gates, Derek P.; White, Peter S.; Brookhart, Maurice  
CORPORATE SOURCE: Department of Chemistry, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599-3290, USA

SOURCE: Chemical Communications (Cambridge) (2000), (1), 47-48  
CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The migratory insertion of sulfur dioxide into the palladium(II)-Me bond of [(dppp)Pd(Me)(OEt<sub>2</sub>)]BAr'<sub>4</sub> [dppp = 1,3-bis(diphenylphosphino)propane, Ar' = C<sub>6</sub>H<sub>3</sub>(CF<sub>3</sub>)<sub>2-3,5</sub>] to yield a unique dimeric eight-membered palladacycle was followed by NMR spectroscopy. The palladacycle product, [(dppp)PdOS(Me)O]<sub>2</sub>[BAr'<sub>4</sub>]<sub>2</sub>, was characterized by x-ray crystallog. as a dichloromethane solvate (triclinic, space group P<sub>2</sub>1<sub>2</sub>1, R<sub>f</sub> = 0.079). Hex-1-ene/SO<sub>2</sub> copolymn. was studied in the presence of a catalytic amount of [(dppp)Pd(Me)(OEt<sub>2</sub>)]BAr'<sub>4</sub>.

IT 6737-42-4DP, 1,3-Bis(diphenylphosphino)propane, palladium methanesulfinate complex  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation in study of migratory insertion reaction of sulfur dioxide into palladium-Me bond)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 23 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:261790 HCAPLUS

DOCUMENT NUMBER: 131:31669

TITLE: Asymmetric transfer hydrogenation of α-acetylaminocinnamic acid catalyzed by rhodium(I) complexes of diphosphine ligands

AUTHOR(S): Gonsalves, A. M. D'A. Rocha; Bayon, J. C.; Pereira,

CORPORATE SOURCE: Mariette M.; Serra, M. E. S.; Pereira, J. P. R.  
Departamento de Quimica, Universidade de Coimbra,  
Coimbra, 3049, Port.

SOURCE: Congreso Iberoamericano de Quimica Inorganica, 6th,  
Puebla, Mex., Apr. 20-25, 1997 (1997), 460-462, 462b.  
Asociacion Mexicana de Quimica Inorganica: Guanajuato,  
Mex.  
CODEN: 67NIAA

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Rh(I)-(3R,4R)-deguphos and -bdpp chelates were highly enantioselective  
catalysts for the asym. transfer hydrogenation of PhCH:C(NHAc)CO<sub>2</sub>H with  
HCO<sub>2</sub>Na in 80% aqueous HCO<sub>2</sub>H, giving 91-92% ee at 90°. Other ligands  
forming 5-7-membered chelate rings were less effective catalysts.

IT 6737-42-4D, 1,3-Propanediylbis[diphenylphosphine, complexes with  
Rh(I)  
RL: CAT (Catalyst use); USES (Uses)  
(asym. transfer hydrogenation of acetamidocinnamic acid catalyzed by  
rhodium(I) chelates with diphosphine ligands)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 24 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:261770 HCAPLUS

DOCUMENT NUMBER: 131:36341

TITLE: Ru<sub>3</sub>(CO)<sub>12</sub> derivatives with polydentate phosphines.  
Catalytic activity

AUTHOR(S): Diaz, Juan C.; Ruiz, Nestor; Bellandi, Fernando;  
Anzellotti, Atilio; Hernandez, Ricardo; Sanchez, Ledys;  
Reyes, Marisela; Suarez, Trino; Fontal, Bernardo

CORPORATE SOURCE: Universidad de Los Andes, Facultad de Ciencias,  
Departamento de quimica, Laboratorio de  
Organometalicos, Merida, Venez.

SOURCE: Congreso Iberoamericano de Quimica Inorganica, 6th,  
Puebla, Mex., Apr. 20-25, 1997 (1997), 391-392.  
Asociacion Mexicana de Quimica Inorganica: Guanajuato,  
Mex.  
CODEN: 67NIAA

DOCUMENT TYPE: Conference

LANGUAGE: Spanish

AB The catalytic activity of Ru<sub>3</sub>(CO)<sub>12</sub> derivs. with di-Ph phosphino methane  
(dppm), di-Ph phosphino propane (dppp), and tris-(2-  
diphenylphosphino,ethyl)phosphine (tetrapos) was studied. The complexes  
Ru<sub>3</sub>(CO)<sub>10</sub>dppm, Ru<sub>3</sub>(CO)<sub>10</sub>dppp, Ru<sub>3</sub>(CO)<sub>8</sub>(dppm)<sub>2</sub> and Ru<sub>3</sub>(CO)<sub>9</sub>(tetrapos) were  
prepared and their activity for hydrogenation of olefins and unsatd.  
compds., hydroformylation, and preparation of amines. At low pressures the  
complexes favor isomerization but at high pressure they favor  
hydrogenation. The reactions catalyzed by these complexes include: the  
hydrogenation of cyclic olefins, unsatd. complexes, acetonitrile,  
nitrobenzene, acetone, 1-hexene; the isomerization of allylic alc.: the  
hydroformylation of 1-hexene and cis-2-hexene: and the synthesis of amines  
from ethanol and ammonia.

IT 6737-42-4D, complexes with ruthenium and carbonyl  
RL: CAT (Catalyst use); USES (Uses)  
(Ru<sub>3</sub>(CO)<sub>12</sub> derivs. with polydentate phosphines and catalytic activity)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 25 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:753728 HCAPLUS  
DOCUMENT NUMBER: 128:88385  
ORIGINAL REFERENCE NO.: 128:17269a  
TITLE: Quaternary ammonium salts of phosphines as ligands and their recycling by membrane techniques or phase separation. Part I. Monophasic systems  
AUTHOR(S): Bahrmann, Helmut; Haubs, Michael; Muller, Thomas; Schopper, Norbert; Cornils, Boy  
CORPORATE SOURCE: Werk Ruhrchemie, Hoechst AG, 46128 Oberhausen, Germany  
SOURCE: Journal of Organometallic Chemistry (1997), 545-546, 139-149  
CODEN: JORCAI; ISSN: 0022-328X  
PUBLISHER: Elsevier Science S.A.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Quaternary ammonium salts of functionalized tertiary phosphines can serve as ligands for transition metal catalysts in hydroformylation reactions. Besides these properties they offer special advantages for the catalyst separation using phase separation or membrane techniques.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, sulfonated, distearylamine salt, rhodium complex  
RL: CAT (Catalyst use); USES (Uses)  
(quaternary ammonium salts of phosphines as ligands for hydroformylation catalysts)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

IT 6737-42-4DP, 1,3-Bis(diphenylphosphino)propane, sulfonated, distearylamine salt  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(quaternary ammonium salts of phosphines as ligands for hydroformylation catalysts)

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

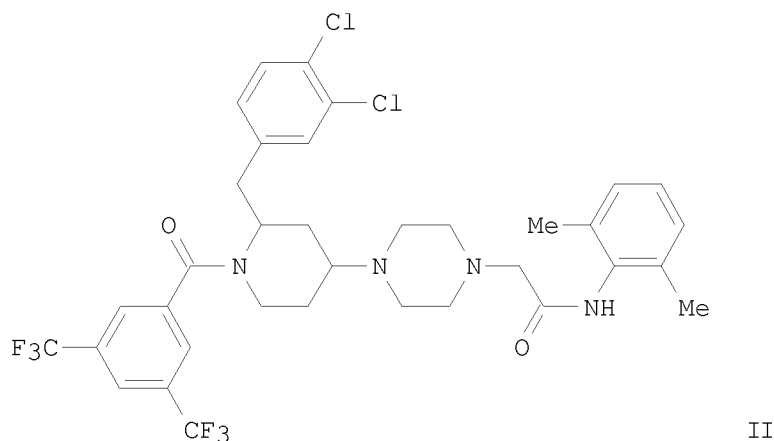
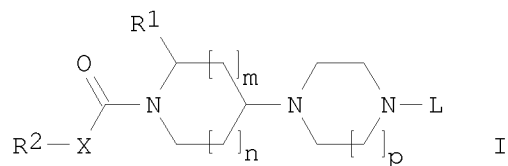
L14 ANSWER 26 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:425258 HCAPLUS  
DOCUMENT NUMBER: 127:34245  
ORIGINAL REFERENCE NO.: 127:6603a,6606a  
TITLE: Preparation of 1-(1,2-disubstituted piperidinyl)-4-substituted piperazine derivatives as substance-P antagonists  
INVENTOR(S): Janssens, Frans Eduard; Sommen, Francois Maria;

Surleraux, Dominique Louis Nestor Ghislaine;  
 Leenaerts, Joseph Elisabeth; Van Roosbroeck, Yves  
 Emiel Maria  
 PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.; Janssens, Frans  
 Eduard; Sommen, Francois Maria; Surleraux, Dominique  
 Louis Nestor Ghislaine; Leenaerts, Joseph Elisabeth;  
 Van Roosbroeck, Yves Emiel Maria  
 SOURCE: PCT Int. Appl., 69 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9716440	A1	19970509	WO 1996-EP4660	19961025
W: AL, AM, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KG, KR, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AZ, BY, KZ, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
TW 460473	B	20011021	TW 1996-85113017	19961024
CA 2234096	C	19970509	CA 1996-2234096	19961025
CA 2234096	A1	19970509		
AU 9674932	A	19970522	AU 1996-74932	19961025
AU 704155	B2	19990415		
EP 862566	A1	19980909	EP 1996-937248	19961025
EP 862566	B1	20000112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI				
CN 1205699	A	19990120	CN 1996-199225	19961025
CN 1117744	C	20030813		
BR 9611184	A	19990330	BR 1996-11184	19961025
HU 9802985	A2	19991028	HU 1998-2985	19961025
HU 9802985	A3	20021028		
JP 11514634	T	19991214	JP 1997-517050	19961025
JP 3073238	B2	20000807		
AT 188691	T	20000115	AT 1996-937248	19961025
ES 2143238	T3	20000501	ES 1996-937248	19961025
PT 862566	T	20000630	PT 1996-937248	19961025
IL 123962	A	20010111	IL 1996-123962	19961025
PL 185029	B1	20030228	PL 1996-327406	19961025
CZ 291794	B6	20030514	CZ 1998-1322	19961025
ZA 9609090	A	19980429	ZA 1996-9090	19961029
HR 960507	B1	20010831	HR 1996-507	19961030
IN 1996CA01880	A	20050304	IN 1996-CA1880	19961031
NO 9801534	A	19980624	NO 1998-1534	19980403
NO 310232	B1	20010611		
US 6197772	B1	20010306	US 1998-54963	19980403
GR 3033154	T3	20000831	GR 2000-400847	20000404
US 6521621	B1	20030218	US 2000-745513	20001222
US 37886	E1	20021015	US 2001-935698	20010823
CN 1438220	A	20030827	CN 2002-157427	20021217
PRIORITY APPLN. INFO.:			EP 1995-202929	A 19951030
			EP 1996-937248	A 19961025
			WO 1996-EP4660	W 19961025
			US 1998-54963	A1 19980403

OTHER SOURCE(S): MARPAT 127:34245  
 GI



AB The title compds. [I; n = 0-2; m = 1-2 (if m = 2, then n = 1); p = 1-2; Q = O, NR<sub>3</sub>; X = a covalent bond, a bivalent radical of formula O, S, NR<sub>3</sub>; R<sub>1</sub> = Ar<sub>1</sub>, Ar<sub>1</sub>C<sub>1</sub>-6alkyl, di(Ar<sub>1</sub>)C<sub>1</sub>-6alkyl (wherein each C<sub>1</sub>-6alkyl group is optionally substituted with hydroxy, C<sub>1</sub>-4alkyloxy, oxo, a ketalized oxo substituent); R<sub>2</sub> = Ar<sub>2</sub>, Ar<sub>2</sub>C<sub>1</sub>-6alkyl, Het<sub>1</sub>, Het<sub>1</sub>C<sub>1</sub>-6alkyl; R<sub>3</sub> = H, C<sub>1</sub>-6alkyl; L = H; Ar<sub>3</sub>; C<sub>1</sub>-6alkyl, etc. Ar<sub>1</sub>, Ar<sub>2</sub>, Ar<sub>3</sub> = (un)substituted Ph; Het<sub>1</sub>, Het<sub>2</sub> = monocyclic, bicyclic heterocycle] and their N-oxide forms, the pharmaceutically acceptable addition salts and the stereoisomeric forms, useful as substance-P antagonists were prepared and formulated. Thus, reaction of 3,5-bis(trifluoromethyl)benzoyl chloride with (±)-trans-4-{2-[(3,4-dichlorophenyl)methyl]-4-piperidinyl}-N-(2,6-dimethylphenyl)-1-piperazineacetamide in the presence of Et<sub>3</sub>N in DCM afforded 44% II which showed IC<sub>50</sub> of 0.13x10<sup>-9</sup> M against substance-P induced relaxation of the pig coronary arteries.

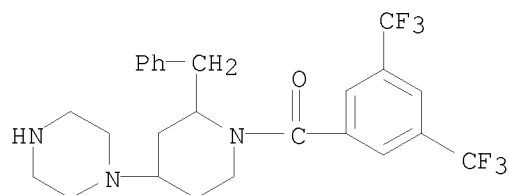
IT 190965-10-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of 1-(1,2-disubstituted piperidinyl)-4-substituted piperazine derivs. as substance-P antagonists)

RN 190965-10-7 HCAPLUS

CN Methanone, [3,5-bis(trifluoromethyl)phenyl][2-(phenylmethyl)-4-(1-piperazinyl)-1-piperidinyl]- (CA INDEX NAME)



L14 ANSWER 27 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:234649 HCAPLUS  
DOCUMENT NUMBER: 126:277744  
ORIGINAL REFERENCE NO.: 126:53855a,53858a  
TITLE: Study on catalysts for amidocarbonylation of  
isobutanal to N-acetylvaline  
AUTHOR(S): Xu, Pianpian; Lin, Haiqiang; Xu, Changbin; Zhang,  
Fanxian  
CORPORATE SOURCE: Department of Chemistry, Xiamen University, Xiamen,  
361005, Peop. Rep. China  
SOURCE: Xiamen Daxue Xuebao, Ziran Kexueban (1996), 35(4),  
538-544  
CODEN: HMMHAF; ISSN: 0438-0479  
PUBLISHER: Xiamen Daxue  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB The N-acetylvaline was synthesized from isobutanal, acetamide and syngas  
in the presence of CoCl<sub>2</sub> as a catalyst precursor. The yield of the title  
compound was 92% at 1200, 7.8 MPa, and CO/H = 3 using CoCl<sub>2</sub>-PPh<sub>3</sub> as catalyst  
system. Detection of N-acetylisobutenylamine as intermediate and  
N-acetylisobutylamine as byproduct suggested a possible mechanism for this  
new process.  
IT 6737-42-4D, DPPP, complex with cobalt compds.  
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES  
(Uses)  
(catalysts for amidocarbonylation of isobutanal to N-acetylvaline)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 28 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:635000 HCAPLUS  
DOCUMENT NUMBER: 125:248798  
ORIGINAL REFERENCE NO.: 125:46521a,46524a  
TITLE: Process for the preparation of copolymers based on  
carbon monoxide and at least one compound having an  
alkenylic unsaturation  
INVENTOR(S): Milani, Barbara; Mestroni, Giovanni; Sommazzi, Anna;  
Garbassi, Fabio  
PATENT ASSIGNEE(S): Enichem S.P.A., Italy  
SOURCE: Eur. Pat. Appl., 12 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 728791	A1	19960828	EP 1996-101967	19960212
EP 728791	B1	19990623		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, LI, NL, SE				
AT 181561	T	19990715	AT 1996-101967	19960212
US 5739264	A	19980414	US 1996-604651	19960221
JP 08253579	A	19961001	JP 1996-36835	19960223
PRIORITY APPLN. INFO.:			IT 1995-MI337	A 19950223
OTHER SOURCE(S):	MARPAT	125:248798		

AB A process for the preparation of alternated linear copolymers based on CO and one or more compds. having an unsatn. of the alkenylic type comprises, reacting in a halogenated aromatic or aliphatic solvent the CO and one or more compds. having an alkenylic unsatn. in the presence of a catalyst having general formula (I)  $[Pd(chel)(chel')]+[A-]$  wherein: chel represents a non-charged bidentate chelating agent, chel' represents the anion of an organic compound containing a double carbon-carbon bond coordinated via  $\pi$  bond to palladium and a carbanion bound via  $\sigma$  bond to palladium which is co-ordinated to the metal as a bidentate chelating agent and A- is an anion of a non-esterifiable or almost non-esterifiable and non-coordinating acid.

IT 6737-42-4D, palladium complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of alternating copolymers based on carbon monoxide and at least one compound having an alkenylic unsatn.)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$Ph_2P-(CH_2)_3-PPh_2$

L14 ANSWER 29 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:184370 HCAPLUS

DOCUMENT NUMBER: 124:289010

ORIGINAL REFERENCE NO.: 124:53587a, 53590a

TITLE: Preparation of esters from biphenyl-4-carboxylic acids and phenol compounds

INVENTOR(S): Kubota, Yoshihiro; Hanaoka, Takamasa; Takeuchi, Kazuhiko; Sugi, Yoshihiro

PATENT ASSIGNEE(S): Kogyo Gijutsuin, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

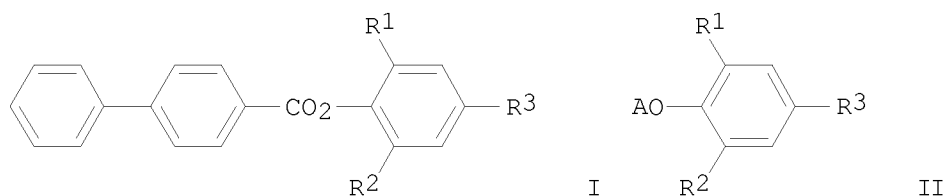
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08012623	A	19960116	JP 1994-164463	19940623
JP 2535788	B2	19960918		
PRIORITY APPLN. INFO.:			JP 1994-164463	19940623
OTHER SOURCE(S):		CASREACT 124:289010; MARPAT 124:289010		

GI



AB The title esters I ( $R_1$ -3 = H, alkyl, alkoxy, aryl;  $R_1$  and  $R_2$  are not steric-hindrance group) are prepared by treating 4-bromobiphenyl (III) with CO and phenols II ( $A = H$ ) in the presence of strongly organic bases using Pd complex catalysts. Alternatively, I are prepared by treating III with CO

and II (A = K, Na) using the catalysts. Autoclaving a mixture of III, PhOH, PdCl<sub>2</sub>, DBU, and 1,3-bis(diphenylphosphino)propane in C<sub>6</sub>H<sub>6</sub> at 100° and 5 bar CO for 2 h gave 90% Ph biphenyl-4-carboxylate.

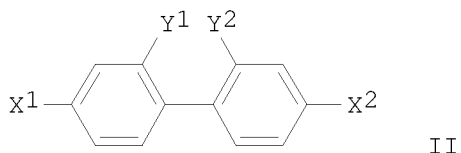
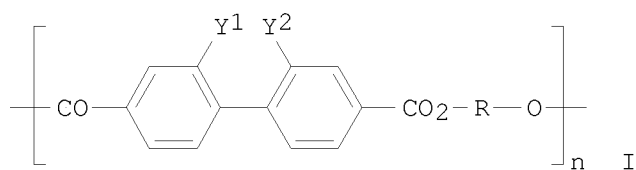
IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, palladium complex  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of Ph bisphenylcarboxylates from bromobiphenyl and CO and phenols using Pd complex catalysts)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 30 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:331305 HCAPLUS  
 DOCUMENT NUMBER: 122:188513  
 ORIGINAL REFERENCE NO.: 122:34548h,34549a  
 TITLE: Preparation of poly(biphenyl dicarboxylates)  
 INVENTOR(S): Kubota, Yoshihiro; Takeuchi, Kazuhiko; Hanaoka, Takamasa; Matsuzaki, Takehiko; Sugi, Yoshihiro  
 PATENT ASSIGNEE(S): Kogyo Gijutsuin, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06298928	A	19941025	JP 1993-114001	19930416
JP 2535756	B2	19960918		
PRIORITY APPLN. INFO.: GI			JP 1993-114001	19930416



AB Polymers I (Y<sub>1</sub>, Y<sub>2</sub> = H or Y<sub>1</sub>Y<sub>2</sub> = CH<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, CO; R = C<sub>2</sub>-10 bivalent aliphatic hydrocarbon residue; n = 1-40) are prepared by reacting dihalogenated biphenyls II (X<sub>1</sub>, X<sub>2</sub> = Br, I) with HOROH and CO in the presence of Pd-phosphine complexes and basic substances. Thus, 4,4'-diiodobiphenyl 2.5, 1,10-decanediol 2.5, PdCl<sub>2</sub> 0.1, 1,3-bis(diphenylphosphino)propane 0.2, and 1,8-diazabicyclo[5.4.0]-7-undecene 5.5 mmol were dissolved in PhCl, pressurized to 20 kg/cm<sup>2</sup> with CO, and stirred vigorously at

120° for 5 h to obtain 91% polymers having m.p. 176°, Mw 1.4 + 104, and Mw/Mn 3.42.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, complexes with palladium chloride

RL: CAT (Catalyst use); USES (Uses)  
(preparation of polyesters from dihalogenated biphenyls, carbon monoxide and diols)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 31 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:331304 HCAPLUS

DOCUMENT NUMBER: 122:188512

ORIGINAL REFERENCE NO.: 122:34545a,34548a

TITLE: Preparation of poly(biphenyl dicarboxylates)

INVENTOR(S): Kubota, Yoshihiro; Takeuchi, Kazuhiko; Hanaoka, Takamasa; Matsuzaki, Takehiko; Sugi, Yoshihiro

PATENT ASSIGNEE(S): Kogyo Gijutsuin, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

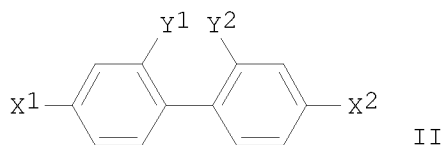
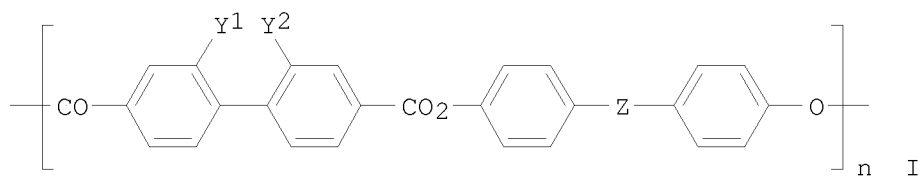
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06298927	A	19941025	JP 1993-114000	19930416
JP 2517871	B2	19960724		
PRIORITY APPLN. INFO.: GI			JP 1993-114000	19930416



AB The polymers I [Y1, Y2 = H or Y1Y2= CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CO; Z = CMe<sub>2</sub>, cyclohexylidene, C(CF<sub>3</sub>)<sub>2</sub>, CHMe, CMePh, butylidene, 1,4-diisopropylbenzene- $\alpha,\alpha'$ -diyl, 3H-1-isobenzofuranon-3-ylidene, 2,5-cyclohexadien-1-one-4-methylene, SO<sub>2</sub>, O, S; n = 1-70] are prepared by reacting II (X1, X2 = Br, I) with HO-p-C<sub>6</sub>H<sub>4</sub>ZC<sub>6</sub>H<sub>4</sub>-p-OH and CO in the presence of Pd-phosphine complexes and basic substances. Thus, 2,7-dibromo-9,10-dihydrophenanthrene 2.5, 2,2-bis(4-hydroxyphenyl)propane

2.5, PdCl<sub>2</sub> 0.1, Ph<sub>3</sub>P 0.4, and 1,8-diazabicyclo[5.4.0]-7-undecene 5.5 mmol were dissolved in 10 mL PhCl, pressurized to 10 kg/cm<sup>2</sup> with CO, and stirred at 120° for 3 h to obtain 97% polymers having m.p. ≥400°, Mw 9.2 + 104, and Mw/Mn 2.28.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, complexes with palladium chloride  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of polyesters from dihalogenated biphenyl compds., carbon monoxide and diols)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 32 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:78875 HCAPLUS  
DOCUMENT NUMBER: 123:111321  
ORIGINAL REFERENCE NO.: 123:19877a,19880a  
TITLE: Hydroformylation of vinylarenes catalyzed by dicarbonyl(acetylacetonate)rhodium complexes under atmospheric pressure  
AUTHOR(S): Chen, Wanzhi; Xu, Yun; Liao, Shi Jian  
CORPORATE SOURCE: Inst. New Mater., Shandong Univ., Jinan, Peop. Rep. China  
SOURCE: Shandong Daxue Xuebao, Ziran Kexueban (1994), 29(2), 197-202  
CODEN: SDXKEU; ISSN: 0559-7234  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
AB Hydroformylation of styrene and p-methylstyrene catalyzed by Rh(acac)(CO)<sub>2</sub> (I; acac = acetylacetonate) was studied under atmospheric pressure.  
Complexation  
with phosphine ligands showed higher catalytic activity than I alone in the order Ph<sub>3</sub>P < Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> < Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>PPh<sub>2</sub> < P(OPh)<sub>3</sub>. Up to 95% of 2-arylpropanal can be obtained in the presence of diphosphine ligands.  
IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, complexes with rhodium carbonyl compds.  
RL: CAT (Catalyst use); USES (Uses)  
(hydroformylation of vinylarenes catalyzed by dicarbonyl(acetylacetonate)rhodium complexes under atmospheric pressure)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 33 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:57121 HCAPLUS  
DOCUMENT NUMBER: 120:57121  
ORIGINAL REFERENCE NO.: 120:10387a  
TITLE: An efficient ruthenium complex catalyst for the carbonylation of methanol to methyl formate  
AUTHOR(S): Choi, Seok Ju; Lee, Jae Sung; Kim, Young Gul  
CORPORATE SOURCE: Res. Cent. Catal. Technol., Pohang Inst. Sci. Technol., Pohang, S. Korea  
SOURCE: Journal of Molecular Catalysis (1993), 85(2), L109-L116

CODEN: JMCADS; ISSN: 0304-5102

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Various promoters and solvents were studied to enhance the catalytic activity of Ru<sub>3</sub>(CO)<sub>12</sub> for carbonylation of MeOH. An efficient system employs Et<sub>4</sub>N<sup>+</sup>Cl<sup>-</sup> as promoter and N-methyl-2-pyrrolidinone as solvent. The catalyst system is resistant to poisoning by H<sub>2</sub>O and CO<sub>2</sub> compared to conventional catalysts.

IT 6737-42-4D, 1,3-Bis(diphenylphosphinyl)propane, ruthenium complexes

RL: CAT (Catalyst use); USES (Uses)

(catalysts containing, for carbonylation of methanol)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 34 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:39467 HCAPLUS

DOCUMENT NUMBER: 120:39467

ORIGINAL REFERENCE NO.: 120:7161a,7164a

TITLE: Silver(I) complex formation with phosphorus donors in propylene carbonate: a thermodynamic and spectroscopic investigation

AUTHOR(S): Del Zotto, Alessandro; Di Bernardo, Plinio; Tolazzi, Marilena; Tomat, Giuliana; Zanonato, Pierluigi

CORPORATE SOURCE: Dip. Sci. Tecnol. Chim., Univ. Udine, Udine, 33100, Italy

SOURCE: Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1993), (20), 3009-13  
CODEN: JCDBI; ISSN: 0300-9246

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The thermodyn. of complex formation between silver(I) and PPh<sub>3</sub>, bis(diphenylphosphino)methane (dppm), 1,2-bis(diphenylphosphino)ethane (dppe) and 1,3-bis(diphenylphosphino)propane (dppp) was studied in propylene carbonate at 298 K and 0.1 mol dm<sup>-3</sup> ionic strength (NET4ClO<sub>4</sub>) by potentiometric and calorimetric techniques. Within the silver(I) concentration range studied, PPh<sub>3</sub> forms 3 successive mononuclear complexes, dppm only polynuclear species, whereas mononuclear complexes, in addition to polynuclear ones, are formed by dppe and dppp. The thermodyn. data show that all complexes are stabilized by exothermic terms, the entropy changes being neg. In the mononuclear complexes, dppe and dppp act as chelating agents while in the very stable [Ag<sub>2</sub>L<sub>2</sub>]<sup>2+</sup> species all the diphosphines behave as bridging ligands. These conclusions were confirmed by <sup>31</sup>P NMR studies on solns. of silver(I). Comparison of the thermodyn. data for formation of the silver(I) complexes with the same ligands in DMSO show that the complexes are considerably weaker in DMSO, mainly reflecting the stronger oxidation of Ag<sup>+</sup> in DMSO with respect to propylene carbonate.

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, silver complexes

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(stability consts. and thermodyn. of coordination of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P- (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 35 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:539690 HCAPLUS  
DOCUMENT NUMBER: 119:139690  
ORIGINAL REFERENCE NO.: 119:25087a  
TITLE: Method for preparing glycosides  
INVENTOR(S): Ernst, Beat; Heneghan, Michael; Hafner, Andreas  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
SOURCE: Eur. Pat. Appl., 31 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 531256	A1	19930310	EP 1992-810654	19920826
EP 531256	B1	19970423		
R: CH, DE, FR, GB, IT, LI, NL				
US 5342929	A	19940830	US 1992-937818	19920831
CA 2077410	A1	19930305	CA 1992-2077410	19920902
JP 05202084	A	19930810	JP 1992-258848	19920903
PRIORITY APPLN. INFO.:			CH 1991-2603	A 19910904

OTHER SOURCE(S): CASREACT 119:139690; MARPAT 119:139690

AB Glycosides were prepared in high yield by treating a protected sugar with a free anomeric OH group with an alc., thiol, or protected sugar with a non-anomeric free OH group in presence of a metal complex catalyst. The anomeric ratio of the product could be influenced by the choice of catalyst. Thus, tetra-O-benzyl-D-glucopyranose was treated with MeOH-HC(OMe)<sub>3</sub> in presence of (Ph<sub>3</sub>P)<sub>3</sub>CCH<sub>2</sub>Rh(MeCN)<sub>3</sub>(CF<sub>3</sub>CO<sub>2</sub>-)<sub>3</sub> to give 92% glycoside in 59:41 anomeric ratio.

IT 6737-42-4D, Pd complexes  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(glycosidation catalyst)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 36 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:530663 HCAPLUS  
DOCUMENT NUMBER: 119:130663  
ORIGINAL REFERENCE NO.: 119:23205a, 23208a  
TITLE: Salicylate ion-selective membrane electrodes based on metal-bis(diphenylphosphino)propane complexes  
AUTHOR(S): Torihara, Makoto; Kamata, Satsuo  
CORPORATE SOURCE: Fac. Eng., Kagoshima Univ., Kagoshima, 890, Japan  
SOURCE: Bunseki Kagaku (1993), 42(6), 375-9  
CODEN: BNSKAK; ISSN: 0525-1931

DOCUMENT TYPE: Journal  
LANGUAGE: Japanese

AB The response properties of membrane-coated carbon rod electrodes toward the salicylate anion were investigated. New electrodes were prepared by incorporating bis(diphenylphosphino)propane (BDPPP) into a plasticized poly(vinyl chloride) membrane, and then coating it on a carbon rod surface. These electrodes were used for immersion into a solution containing a metal [Pd(II), Rh(III) or Cu(II)] and salicylate ions in order to form BDPPP complexes inside the membrane. Although the two other complexes

responded to the salicylate ion, the electrode with the Cu(II) complex showed the following good response properties: a near-Nernstian slope of 58-60 mV/decade, detection limit of  $8 \times 10^{-6}$  mol dm<sup>-3</sup> and a response time of 5-6 s over a pH range of 4.5-9.5. The order of the selectivity coefficient for foreign anions roughly followed the Hoffmeister series. The interfering effects of acetate and benzoate ions were rather weak, as was the effect of the chloride ion, when compared to that of an electrode based on the tin(IV) porphyrin complex. BDPPP forms a 1:2 Cu(II)/ligand complex in which the exchange of counter anion produces the potential response.

IT 6737-42-4D, metal complexes  
 RL: ANST (Analytical study)  
 (salicylate ion-selective membrane electrodes based on)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 37 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:591516 HCAPLUS

DOCUMENT NUMBER: 117:191516

ORIGINAL REFERENCE NO.: 117:33063a,33066a

TITLE: Preparation of 9,10-dihydrophenanthrene-2,7-dicarboxylic acid diesters as intermediates for heat-resistant or liquid-crystalline polymers

INVENTOR(S): Sugi, Yoshihiro; Takeuchi, Kazuhiko; Doi, Teisho; Takagi, Satoru

PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan; Zaidan Hojin Sekiyu Sangyo Kasseika Center

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

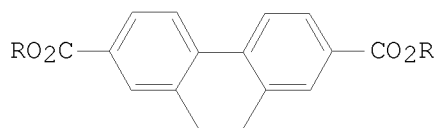
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04169555	A	19920617	JP 1990-297897	19901102
JP 2512626	B2	19960703		

PRIORITY APPLN. INFO.: JP 1990-297897 19901102

OTHER SOURCE(S): CASREACT 117:191516; MARPAT 117:191516

GI



I

AB The title esters I (R = C<sub>1</sub>-20 hydrocarbyl) are prepared by treating 2,7-dibromo-9,10-dihydrophenanthrene (II) with CO and ROH in the presence of bases and Pd complex catalysts containing A<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PA<sub>2</sub> (A = C<sub>1</sub>-10 hydrocarbyl; n = 3, 4) as chelating ligand. A solution of I, Et<sub>3</sub>N, PdCl<sub>2</sub>, and 1,3-bis(diphenylphosphino)propane in EtOH-benzene mixture was autoclaved with CO at 140° for 4 h to give 98.2% I (R = Et).

IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, palladium complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for alkoxycarbonylation of dibromodihydrophenanthrene)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 38 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:570990 HCAPLUS  
 DOCUMENT NUMBER: 117:170990  
 ORIGINAL REFERENCE NO.: 117:29545a,29548a  
 TITLE: Preparation of biphenyl-4,4'-dicarboxylic acid diesters as intermediates for heat-resistant or liquid-crystalline polymers  
 INVENTOR(S): Sugi, Yoshihiro; Takeuchi, Kazuhiko; Doi, Teisho; Takagi, Satoru  
 PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan; Zaidan Hojin Sekiyu Sangyo Kasseika Center  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04169556	A	19920617	JP 1990-297898	19901102
JP 2575528	B2	19970129		

PRIORITY APPLN. INFO.: JP 1990-297898 19901102  
 OTHER SOURCE(S): CASREACT 117:170990; MARPAT 117:170990  
 AB The title esters RO<sub>2</sub>C(p-C<sub>6</sub>H<sub>4</sub>)<sub>2</sub>CO<sub>2</sub>R (I; R = C<sub>1</sub>-20 hydrocarbyl) are prepared by treating 4,4'-dibromobiphenyl (II) with CO and ROH in the presence of bases and Pd complex catalysts containing A<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PA<sub>2</sub> (A = C<sub>1</sub>-10 hydrocarbyl; n = 3, 4) as chelating ligand. A solution of I, Et<sub>3</sub>N, PdCl<sub>2</sub>, and 1,3-bis(diphenylphosphino)propane in EtOH-benzene mixture was autoclaved with CO at 140° for 3 h to give 93.4% I (R = Et).  
 IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, palladium complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for alkoxycarbonylation of dibromobiphenyl)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 39 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:482505 HCAPLUS  
 DOCUMENT NUMBER: 117:82505  
 ORIGINAL REFERENCE NO.: 117:14167a,14170a  
 TITLE: Potentiometric flow analysis device using membrane-coated carbon rod ion-selective electrode detectors  
 AUTHOR(S): Wang, Enju; Kamata, Satsuo  
 CORPORATE SOURCE: Fac. Eng., Kagoshima Univ., Kagoshima, 890, Japan  
 SOURCE: Analytica Chimica Acta (1992), 261(1-2), 399-404

CODEN: ACACAM; ISSN: 0003-2670

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A flow-through anal. system that utilizes a membrane-coated carbon rod ion-selective electrode was investigated. Electrodes for Cu<sup>2+</sup> based on a thiuram disulfide neutral carrier and for ClO<sub>4</sub><sup>-</sup>, SCN<sup>-</sup>, NO<sub>3</sub><sup>-</sup> and Cl<sup>-</sup> based on a bis(diphenylphosphino)propane-copper complex as ion exchanger exhibited satisfactory performance in a continuous-flow system. The response of the anion electrodes in a flow-injection system was near Nernstian in the concentration range 10<sup>-2</sup>-10<sup>-4</sup> or 10<sup>-5</sup>M. Highly reproducible measurements were obtained with sample vols. of 30-100 μL and a sample injection rate of up to 400 h<sup>-1</sup>. The chloride electrode was suitable for the FIA determination of Cl<sup>-</sup> in sea water and urine.

IT 6737-42-4D, copper complex

RL: ANST (Analytical study)

(membrane-coated carbon rod ion-selective electrode based on, for anion detection by flow potentiometry)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P<sup>-</sup> (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 40 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:206797 HCAPLUS

DOCUMENT NUMBER: 116:206797

ORIGINAL REFERENCE NO.: 116:34803a,34806a

TITLE: Coated carbon-rod anion [-selective] electrodes using bis(diphenylphosphino)propane-metal complexes

AUTHOR(S): Wang, Enju; Ohashi, Kousaburo; Kamata, Satsuo

CORPORATE SOURCE: Fac. Eng., Kagoshima Univ., Kagoshima, 890, Japan

SOURCE: Analytical Sciences (1991), 7(Suppl., Proc. Int. Congr. Anal. Sci., 1991, Pt. 1), 755-6

CODEN: ANSCEN; ISSN: 0910-6340

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several membrane-coated carbon rod anion-selective electrodes (CCRISE) were prepared by incorporating metal complex of bis(diphenylphosphino)propane (BDPPP) in a plasticized PVC film and their response characteristics were studied. Highly sensitive sensors were obtained with a detection limit of 10<sup>-7</sup>, 10<sup>-6</sup>, 10<sup>-5.5</sup> and 10<sup>-5.0</sup>M for ClO<sub>4</sub><sup>-</sup>; SCN<sup>-</sup> and I<sup>-</sup>; Br<sup>-</sup> and NO<sub>3</sub><sup>-</sup>; Cl<sup>-</sup> and benzoate (Bz<sup>-</sup>) ions, resp.

IT 6737-42-4D, copper and silver complexes

RL: ANST (Analytical study)

(PVC membrane containing, in coated carbon-rod electrode for anion determination)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P<sup>-</sup> (CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 41 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:114134 HCAPLUS

DOCUMENT NUMBER: 114:114134

ORIGINAL REFERENCE NO.: 114:19205a,19208a

TITLE: Anion-selective membrane electrode based on bis(diphenylphosphino) alkane-copper(II) complexes

AUTHOR(S): Kamata, Satsuo; Nomura, Shinji; Ohashi, Kousaburo  
CORPORATE SOURCE: Fac. Eng., Kagoshima Univ., Kagoshima, 890, Japan  
SOURCE: Bunseki Kagaku (1990), 39(11), 677-81  
CODEN: BNSKAK; ISSN: 0525-1931

DOCUMENT TYPE: Journal  
LANGUAGE: Japanese

AB Poly(vinyl chloride) (PVC) membrane and membrane-coated C rod anion-selective electrodes were made by using the Cu(II) complexes of bis(diphenylphosphino)ethane (BDPPE) and bis(diphenylphosphino)propane (BDPPP) as new anion sensor materials. The PVC sensing membrane was made from THF solution containing sensor materials 3, o-nitrophenyl octyl ether (plasticizer) 55, and PVC 42 weight%. The chloride ion selective membrane electrode showed a Nernstian slope of 55-58 mV/decade and a response time of 5 s at pH range of 3.7-9.0. Although the order of selectivity coefficient value for foreign anions followed the Hofmeister series, the interfering effect of hydrophile anions for this chloride ion selective electrode was rather weak, compared to that of the electrodes based on quaternary ammonium salt or organic tin compds. BDPPE forms a 1:2 Cu<sup>2+</sup>/ligand complex and the co-anion was exchanged to produce a potential response. The membrane-coated carbon rod electrodes for Cl<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, and ClO<sub>4</sub><sup>-</sup> exhibited Nernstian slopes of 56-57 mV/decade. The order of their detection limits was Cl<sup>-</sup> > NO<sub>3</sub><sup>-</sup> > ClO<sub>4</sub><sup>-</sup>. The ClO<sub>4</sub><sup>-</sup> electrode showed the best detection limit, 10<sup>-7</sup> mol dm<sup>-3</sup>.

IT 6737-42-4D, copper complex  
RL: ANST (Analytical study)  
(in anion-selective poly(vinyl chloride) membrane electrodes)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P<sup>-</sup>(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 42 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:590950 HCAPLUS

DOCUMENT NUMBER: 113:190950

ORIGINAL REFERENCE NO.: 113:32309a,32312a

TITLE: Preparation of 4-cyano-4'-[(S)-2-methylbutyl]biphenyl

INVENTOR(S): Jawdosiuk, Mikolaj; Kaszynski, Piotr

PATENT ASSIGNEE(S): Politechnika Warszawska, Pol.

SOURCE: Pol., 2 pp.  
CODEN: POXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Polish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 136088	B1	19860131	PL 1982-237294	19820706
PRIORITY APPLN. INFO.:			PL 1982-237294	19820706

OTHER SOURCE(S): CASREACT 113:190950

AB The title compound (I) is prepared by (1) reaction of (+)-EtCHMeCH<sub>2</sub>MgBr with 4-bromobiphenyl in the presence of a catalytic complex of bis-1,3-(diphenylphosphino)propane with NiCl<sub>2</sub>, (2) bromination of the resulting 4(S)-(2-methylbutyl)biphenyl in Ac<sub>2</sub>O in the presence of iodine catalyst at 15-40°, and (3) conversion of the 4-bromo-4'-(S)-(2-methylbutyl)biphenyl to I by reaction with CuCN in DMF. The crude I is purified by vacuum distillation

IT 6737-42-4D, nickel complex  
RL: CAT (Catalyst use); USES (Uses)

(catalyst, for coupling of bromobiphenyl and (methylbutyl)magnesium bromide)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 43 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:478897 HCAPLUS

DOCUMENT NUMBER: 113:78897

ORIGINAL REFERENCE NO.: 113:13367a,13370a

TITLE: Preparation of 4-demethoxy-4-carboxydaunomycinones and antitumor anthracycline glycosides

INVENTOR(S): Cabri, Walter; De Bernardinis, Silvia; Francalanci, Franco; Penco, Sergio

PATENT ASSIGNEE(S): Farmitalia Carlo Erba S.r.l., Italy

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

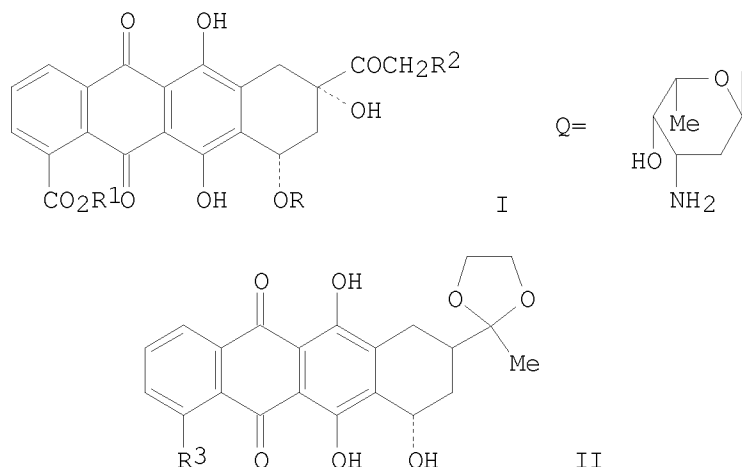
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 354995	A1	19900221	EP 1989-113023	19890715
EP 354995	B1	19920102		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
AT 71105	T	19920115	AT 1989-113023	19890715
ES 2045282	T3	19940116	ES 1989-113023	19890715
WO 9001490	A1	19900222	WO 1989-EP869	19890724
W: AU, DK, FI, HU, JP, KR, SU, US				
AU 8939836	A	19900305	AU 1989-39836	19890724
AU 619331	B2	19920123		
HU 56847	A2	19911028	HU 1989-4607	19890724
HU 208106	B	19930830		
JP 04500956	T	19920220	JP 1989-508175	19890724
JP 2749923	B2	19980513		
RU 2071463	C1	19970110	RU 1989-4894638	19890724
IL 91100	A	19940624	IL 1989-91100	19890725
IL 104975	A	19940624	IL 1989-104975	19890725
ZA 8905729	A	19900530	ZA 1989-5729	19890727
CA 1337985	C	19960123	CA 1989-606902	19890728
US 5218130	A	19930608	US 1991-646594	19910125
DK 9100146	A	19910326	DK 1991-146	19910128
FI 91762	B	19940429	FI 1991-412	19910128
FI 91762	C	19940810		

PRIORITY APPLN. INFO.:	GB 1988-18167	A	19880729
	EP 1989-113023	A	19890715
	WO 1989-EP869	A	19890724
	IL 1989-91100	A3	19890725

OTHER SOURCE(S): MARPAT 113:78897

GI



AB 4-Substituted anthracyclines (I; R = R<sub>2</sub> = H; R<sub>1</sub> = H, straight or branched C<sub>1</sub>-10 alkyl, alkenyl, or alkynyl) were prepared as intermediates for antitumor anthracycline glycosides I (R<sub>1</sub> as above; R = Q; R<sub>2</sub> = H, OH). Thus, treatment of daunomycinone with AlCl<sub>3</sub> in refluxing CH<sub>2</sub>Cl<sub>2</sub> followed by ketalization with HOCH<sub>2</sub>CH<sub>2</sub>OH in the presence of p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H in refluxing PhMe gave daunomycinone derivative II (R<sub>3</sub> = OH). Triflation of the latter with (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>O in pyridine containing (Me<sub>2</sub>CH)<sub>2</sub>NEt and 4-dimethylaminopyridine gave II (R<sub>3</sub> = CF<sub>3</sub>SO<sub>3</sub>) which was stirred at 60° with Pd(OAc)<sub>2</sub>, 1,3-diphenylphosphinopropane, Bu<sub>3</sub>N, and MeOH under CO to give II (R<sub>3</sub> = MeO<sub>2</sub>C). Hydrolysis of the latter with aqueous CF<sub>3</sub>CO<sub>2</sub>H gave I (R = R<sub>2</sub> = H, R<sub>1</sub> = Me) which underwent glycosidation with chlorodaunosamine (QC1) in the presence of AgO<sub>3</sub>SCF<sub>3</sub>, and treatment with HCl/MeOH to give I.HCl (R = Q, R<sub>1</sub> = Me, R<sub>2</sub> = H).

IT 6737-42-4D, complex with palladium acetate

RL: CAT (Catalyst use); USES (Uses)

(catalyst, for alkoxycarbonylation of (triflyloxy)demethyl daunomycinone derivative)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 44 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:447500 HCAPLUS

DOCUMENT NUMBER: 113:47500

ORIGINAL REFERENCE NO.: 113:7949a,7952a

TITLE: Thermodynamic and spectroscopic studies on silver(I) complex formation with phosphorus multidentate ligands in dimethyl sulfoxide

AUTHOR(S): Di Bernardo, Plinio; Dolcetti, Giuliano; Portanova, Roberto; Tolazzi, Marilena; Tomat, Giuliana; Zanonato, Pierluigi

CORPORATE SOURCE: Ist. Chim., Univ. Udine, Udine, I-33100, Italy

SOURCE: Inorganic Chemistry (1990), 29(15), 2859-62

CODEN: INOCAJ; ISSN: 0020-1669

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The thermodyn. parameters of complexation of Ag(I) with bis(diphenylphosphino)methane (dppm), 1,2-bis(diphenylphosphino)ethane

(dppe), 1,3-bis(diphenylphosphino)propane (dppp), bis(2-(diphenylphosphino)ethyl)phenylphosphine (etp), and tris(2-(diphenylphosphino)ethyl)phosphine (PP3) were determined by potentiometric and calorimetric techniques in DMSO. The measurements were conducted at 25° and ionic strength 0.1 (NET4ClO4). Dppm forms only polynuclear species in solution. Mononuclear complexes, in addition to polynuclear species, are by contrast formed with all other ligands. All complexes are formed in strongly exothermic reactions while the entropy changes are neg. The thermodyn. data indicate that, in the mononuclear complexes with Ag(I), the ligands act as chelating agents. Very stable complexes of the type M2L2 are formed by dppm, dppe, and dppp; in these complexes, the diphosphines act as bridging ligands. Structural studies of solns. of Ag(I) by a 31P NMR technique confirm the conclusions drawn from the thermodyn. data about the nature and structure of the complexes formed in solution. Comparisons of the thermodyn. data relative to formation of Ag(I) complexes with analogous ligands coordinating via N show that the Ag(I) complexes with P-donor ligands are far more stable than with N donor ligands.

IT 6737-42-4DP, silver complexes  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in DMSO)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)]

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 45 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:69483 HCAPLUS  
 DOCUMENT NUMBER: 112:69483  
 ORIGINAL REFERENCE NO.: 112:11643a,11646a  
 TITLE: Antitumor activity of bis[bis(diphenylphosphino)alkane and alkene] group VIII metal complexes  
 AUTHOR(S): Schurig, John E.; Meinema, Harry A.; Timmer, Klaas; Long, Byron H.; Casazza, Anna Maria  
 CORPORATE SOURCE: Pharm. Res. Dev. Div., Bristol-Myers Co., Wallingford, CT, USA  
 SOURCE: Progress in Clinical Biochemistry and Medicine (1989), 10(Ruthenium Other Non-Platinum Met. Complexes Cancer Chemother.), 205-16  
 CODEN: PCBMEM; ISSN: 0177-8757  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A broad series of group VIII transition metal complexes of the general type [L<sub>2</sub>MX<sub>m</sub>]<sup>n+</sup> nX<sup>-</sup> [L = Ph<sub>2</sub>P-A-PPh<sub>2</sub>, A = (CH<sub>2</sub>)<sub>2</sub>, (CH<sub>2</sub>)<sub>3</sub> or cis-CH = CH; M = Fe, Co, Rh, Ir, Ni, Pd; X = Cl, Br, I, NO<sub>3</sub>, ClO<sub>4</sub>, CF<sub>3</sub>SO<sub>3</sub>; m = 0-2; n = 0-3] were prepared. Presented here are the results of evaluations of these metal complexes for in vitro cytotoxicity, in vivo antitumor activity in murine tumor models and mechanism of action. Of 21 complexes tested in vitro against a panel of murine and human tumor cell lines, 10 were cytotoxic with IC<sub>50</sub> values of 0.8 to 491 µg/mL. Many of the complexes investigated had antitumor activity against i.p. implanted P388 murine leukemia and i.p. implanted B16 melanoma. The mechanism of action of these complexes appears different from that of cisplatin based on effects on DNA and lack of cross resistance with L1210/DDP, a line of L1210 murine leukemia resistant to cisplatin. These complexes are deficient in antitumor activity against tumors located distal to the site of drug injection (e.g., i.v. P388 leukemia, s.c. B16 melanoma, s.c. M5076 reticulum cell sarcoma and s.c. 16/c mammary adenocarcinoma). It appears that the poor solubility of these compds. contributes to this type of deficiency. Therefore, future efforts with this class of group VIII metal

complexes will focus on increasing solubility  
IT 6737-42-4DP, group VIII metal complexes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and neoplasm-inhibiting activity in human and laboratory  
animal cells  
of)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 46 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1989:178246 HCAPLUS  
DOCUMENT NUMBER: 110:178246  
ORIGINAL REFERENCE NO.: 110:29487a,29490a  
TITLE: The synthesis of boron-containing ceramics by  
pyrolysis of polymeric Lewis base adducts of  
decaborane(14)  
AUTHOR(S): Seyferth, Dietmar; Smith Rees, William, Jr.  
CORPORATE SOURCE: Dep. Chem., Massachusetts Inst. Technol., Cambridge,  
MA, 02139, USA  
SOURCE: Materials Research Society Symposium Proceedings  
(1988), 121(Better Ceram. Chem. 3), 449-54  
CODEN: MRSPDH; ISSN: 0272-9172  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB B10H12 polymeric adducts with Lewis bases were prepared by reaction of  
B10H14 with diphosphines and diamines. These show good promise as  
precursors whose pyrolysis can give either B carbide (in the case of the  
diphosphine polymers) or B carbonitride and B nitride (in the case of the  
diamine polymers).  
IT 6737-42-4DP, reaction products with decaborane  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(ceramic precursor, preparation of)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 47 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1988:131027 HCAPLUS  
DOCUMENT NUMBER: 108:131027  
ORIGINAL REFERENCE NO.: 108:21475a,21478a  
TITLE: Process for the preparation of ketones  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Brit. UK Pat. Appl., 6 pp.  
CODEN: BAXXD  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 2185740 A 19870729 GB 1986-1913 19860127  
 PRIORITY APPLN. INFO.: GB 1986-1913 19860127  
 AB Ketones are prepared by reaction of CO with alkenes in the presence of a catalytic system prepared by combining Pd or Pd carboxylates with R1R2MRMR3R4 (M = P, As, Sb; R = divalent organic bridging group having ≥2 C's in the bridge and R1-4 = (un)substituted hydrocarbyl). An autoclave was charged with diglyme, Pd(II) acetate, (C6H5)2PCH2CH2CH2P(C6H5)2, Me2C6H4SO3H, and CO, heated to 135° to give a mixture of ketones.  
 IT 6737-42-4D, reaction product with palladium acetate  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst, for carbonylation of alkenes)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 48 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1987:576676 HCAPLUS  
 DOCUMENT NUMBER: 107:176676  
 ORIGINAL REFERENCE NO.: 107:28387a,28390a  
 TITLE: Removal of palladium polymerization catalyst residues from carbon monoxide-ethylene copolymers  
 INVENTOR(S): Van Broekhoven, Johannes Adrianus Maria  
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 224304	A1	19870603	EP 1986-202033	19861117
EP 224304	B1	19901010		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
CA 1271291	A1	19900703	CA 1986-522018	19861103
IN 167586	A1	19901117	IN 1986-DE975	19861105
AT 57387	T	19901015	AT 1986-202033	19861117
CN 86107929	A	19870527	CN 1986-107929	19861124
CN 1009370	B	19900829		
DK 8605632	A	19870527	DK 1986-5632	19861124
FI 8604773	A	19870527	FI 1986-4773	19861124
FI 89933	B	19930831		
FI 89933	C	19931210		
AU 8665614	A	19870528	AU 1986-65614	19861124
AU 589710	B2	19891019		
ZA 8608871	A	19870729	ZA 1986-8871	19861124
BR 8605760	A	19870825	BR 1986-5760	19861124
IL 80740	A	19900429	IL 1986-80740	19861124
NO 168050	B	19910930	NO 1986-4690	19861124
NO 168050	C	19920108		
JP 62131024	A	19870613	JP 1986-278951	19861125
JP 06089131	B	19941109		
US 4791190	A	19881213	US 1986-935430	19861126
PRIORITY APPLN. INFO.:			NL 1985-3259	A 19851126
			EP 1986-202033	A 19861117

AB Pd-phosphine polymerization catalyst residues are removed from the title copolymers by treating the copolymer suspension in an organic liquid with CO at  $\geq 60^\circ/\geq 0.1$  bar, so that the temperature is  $\geq 20^\circ$  higher than that at which the polymerization was effected. The presence of Pd contaminants adversely affects the stability of the copolymers during high-temperature processing (e.g., injection molding) by causing polymer discoloration and decomposition. Furthermore, Pd removal allows reuse of the catalyst, thus reducing the cost of polymer manufacture. An autoclave containing 170 mL MeOH was charged with 36 mL MeOH and Pd(OAc)<sub>2</sub> 0.06, (Ph<sub>2</sub>PCH<sub>2</sub>)<sub>3</sub>CMc 0.06, and 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H 0.12 mmol, the polymerization conducted at 65°/55 bars with a 1:1 CO-C<sub>2</sub>H<sub>4</sub> mixture for 1.5 h, the pressure released, the autoclave repressured with CO to 55 bars, the pressure released, the pressurization and release process repeated, the autoclave pressurized with CO to 3 bars, heated to 120°, and maintained under these conditions for 30 min. After cooling and release of the CO pressure, the copolymer was filtered off, washed with MeOH, and dried at 70°, producing 15 g copolymer having a Pd content of 123 ppm (which represents 29% of the total catalyst), vs. 475 ppm (95%) for a control polymerization not subjected to the CO post-treatment.

IT 6737-42-4D, palladium complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization catalysts, removal of residues of, from ethylene copolymers)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 49 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:554921 HCAPLUS

DOCUMENT NUMBER: 107:154921

ORIGINAL REFERENCE NO.: 107:24951a,24954a

TITLE: Copolymers of sulfur dioxide and ethylene

INVENTOR(S): Drent, Eit

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
EP 220765	A1	19870506	EP 1986-201758	19861013
EP 220765	B1	19900124		
R: BE, CH, DE, FR, GB, IT, LI, NL				
CA 1269794	A1	19900529	CA 1986-518706	19860922
CN 86107083	A	19870415	CN 1986-107083	19861010
CN 1010099	B	19901024		
AU 8663826	A	19870416	AU 1986-63826	19861013
AU 588384	B2	19890914		
JP 62095321	A	19870501	JP 1986-242854	19861013
JP 07055985	B	19950614		

PRIORITY APPLN. INFO.: NL 1985-2817 A 19851015

AB Polymers of C<sub>2</sub>H<sub>4</sub>, SO<sub>2</sub>, and, optionally, CO and/or C<20 olefins are prepared by catalytic polymerization. Successively adding 9 mmol 4-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H and 4.5 mmol Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub> to 3 mmol Pd(OAc)<sub>2</sub> in 50 mL MeOH with stirring gave a solid

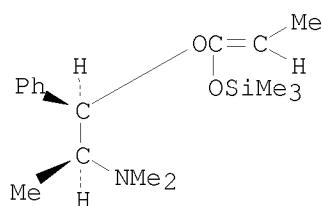
catalyst. Stirring 0.1 mmol of this catalyst in 50 mL MeOH with 3.5 bar SO<sub>2</sub> and 26.5 bar C<sub>2</sub>H<sub>4</sub> at 120° for 5 h gave 1 g of an alternating copolymer with m.p. >300°.

IT 6737-42-4D, Trimethylenebis(diphenylphosphine), complexes with palladium, toluenesulfonic acid salts  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for alternating polymerization of ethylene with sulfur dioxide)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 50 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:84101 HCAPLUS  
DOCUMENT NUMBER: 106:84101  
ORIGINAL REFERENCE NO.: 106:13793a,13796a  
TITLE: Improved enantioselective synthesis of anti  $\alpha$ -methyl- $\beta$ -hydroxy esters through titanium tetrachloride-triphenylphosphine mediated aldol condensation  
AUTHOR(S): Palazzi, Camillo; Colombo, Lino; Gennari, Cesare  
CORPORATE SOURCE: Dip. Chim. Org. Ind., Univ. Milano, Milan, 20133, Italy  
SOURCE: Tetrahedron Letters (1986), 27(15), 1735-8  
CODEN: TELEAY; ISSN: 0040-4039  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 106:84101  
GI



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AB A TiCl<sub>4</sub>-PPh<sub>3</sub> complex catalyzed the aldol addition of the silyl ketene acetal I with RCHO [R = Ph, E-PhCH:CH, E-MeCH:CH, E-Me(CH<sub>2</sub>)<sub>2</sub>CH:CH] or [(Me<sub>3</sub>C)Me<sub>2</sub>SiO](EtO)C:CHMe with PhCHO to give increased enantioselectivity of anti:syn isomers (up to  $\geq 30:1$ ) of diastereomeric  $\alpha$ -methyl- $\beta$ -hydroxy esters HOCHRCHMeCO<sub>2</sub>R<sub>1</sub> (R<sub>1</sub> = N-methylephedrine, Et).  
IT 6737-42-4D, 1,3-Bis(diphenylphosphino)propane, titanium tetrachloride complex  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, in aldol condensations of silyl ketene acetals)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 51 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1985:212107 HCAPLUS  
DOCUMENT NUMBER: 102:212107  
ORIGINAL REFERENCE NO.: 102:33135a,33138a  
TITLE: Coordination number determinations of gold complexes  
by EXAFS spectroscopy  
AUTHOR(S): Eidsness, M. K.; Elder, R. C.  
CORPORATE SOURCE: Dep. Chem., Univ. Cincinnati, Cincinnati, OH, 45221,  
USA  
SOURCE: Springer Proceedings in Physics (1984), 2(EXAFS Near  
Edge Struct. 3), 83-5  
CODEN: SPPPEL; ISSN: 0930-8989  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The determination of Au coordination number with S and P ligands by EXAFS  
spectroscopy was examined. In a transferability test of amplitude and phase  
shift functions from the known, 2-coordinate structure, [Au(PPh<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>]<sup>+</sup>,  
to the known, 4-coordinate structure, [Au(PPh<sub>2</sub>CH<sub>3</sub>)<sub>4</sub>]<sup>+</sup>, the calculated  
coordination is 2 rather than the expected 4. Also the results of fitting  
EXAFS data from Au incorporated into metallothionein suggest a  
2-coordinate-Au site whereas the Zn and Cd atoms (which Au replaces) are  
thought to be 4-coordinate. In light of the difficulties in calculating Au  
coordination nos., further tests of empirical curve fitting for several  
Au-S and Au-P type structures were carried out. Addnl., measurements of  
EXAFS spectra at -185° were made to study the effect of reduced  
thermal motion on the calculated coordination nos. The EXAFS anal. method in  
this study follows those developed by S. P. Cramer and K. O. Hodgson  
(1979). All expts. monitored the Au LIII x-ray absorption edge. Data  
were collected at the Stanford Synchrotron Radiation Laboratory  
IT 6737-42-4D, gold complex  
RL: PRP (Properties)  
(EXAFS of gold coordination number in)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 52 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1985:46423 HCAPLUS  
DOCUMENT NUMBER: 102:46423  
ORIGINAL REFERENCE NO.: 102:7317a,7320a  
TITLE: Polyketones  
INVENTOR(S): Drent, Eit  
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V.,  
Neth.  
SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 121965	A2	19841017	EP 1984-200327	19840308
EP 121965	A3	19870603		
EP 121965	B1	19891227		

R: AT, BE, CH, DE, FR, GB, IT, LI, NL

AT 49010	T	19900115	AT 1984-200327	19840308
CA 1239725	A1	19880726	CA 1984-449329	19840309
AU 8426418	A	19841011	AU 1984-26418	19840404
AU 563011	B2	19870625		
JP 59197427	A	19841109	JP 1984-66024	19840404
JP 05087527	B	19931217		
BR 8401548	A	19841113	BR 1984-1548	19840404
ZA 8402506	A	19841128	ZA 1984-2506	19840404
US 4835250	A	19890530	US 1986-908899	19860918
PRIORITY APPLN. INFO.:			NL 1983-1213	A 19830406
			EP 1984-200327	A 19840308
			US 1984-596788	A1 19840404

AB Polyketones are prepared by copolymn. of olefins or vinyl compds. with CO in the presence of a complex catalyst prepared by reaction of a Pd, Co, or Ni compound, and anion of an acid with pKa <2 that is not a carboxylic acid or hydrogen halide, and a bidentate ligand R1R2MZMR3R4, where M = P, As, or Sb, Z is a divalent organic bridging group containing ≥2 C in the bridge, and R1-R4 are hydrocarbon groups. Thus, a 250-mL autoclave containing Pd(OAc)2 0.1, Ph2P(CH2)3PPh2 0.15, and p-MeC6H4SO3H 2 mmols in 50 mL MeOH was pressurized with CO and ethylene to 20 and 30 bars, resp., and heated at 135° for 0.25 h to give carbon monoxide-ethylene copolymer [25052-62-4] of number-average mol. weight 2600 at a rate of 3000 g/g Pd-h, compared with no polymer when Ph3P was used as ligand.

IT 6737-42-4D, nickel or palladium complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for polymerization of ethylene with carbon monoxide)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph2P- (CH2)3- PPh2

L14 ANSWER 53 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1981:120864 HCAPLUS

DOCUMENT NUMBER: 94:120864

ORIGINAL REFERENCE NO.: 94:19751a,19754a

TITLE: Hydroformylation of olefins

INVENTOR(S): Bartish, Charles M.

PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA

SOURCE: U.S., 7 pp.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4230641	A	19801028	US 1977-853343	19771121
PRIORITY APPLN. INFO.:			US 1977-853343	A 19771121
AB Hydroformylation of alkenes to aldehydes with high normal/branched isomer ratios is catalyzed by Rh complexed with R1R2PAPR3R4 (R1,R3 = C2-6 alkenyl, C1-6 alkyl, H, Ph; R2, R4 = Ph or substituted Ph; A = C2-10 alkylene). Data for several runs for hydroformylation of octene using Rh6(CO)16 complexed with several phosphine ligands are tabulated.				
IT 6737-42-4D, rhodium complexes				
RL: CAT (Catalyst use); USES (Uses)				
(catalysts, for hydroformylation of alkenes)				

RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 54 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:639917 HCAPLUS  
DOCUMENT NUMBER: 93:239917  
ORIGINAL REFERENCE NO.: 93:38459a,38462a  
TITLE: Stereoselective synthesis of dipeptides by asymmetric reduction of dehydropeptides catalyzed by chiral rhodium complexes

AUTHOR(S): Meyer, Dominique; Poulin, Jean Claude; Kagan, Henri B.; Levine-Pinto, Huguette; Morgat, Jean Louis; Fromageot, Pierre

CORPORATE SOURCE: Lab. Synth. Asymetr., Univ. Paris-Sud, Orsay, 91405, Fr.

SOURCE: Journal of Organic Chemistry (1980), 45(23), 4680-2  
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The asym. hydrogenation of AcNHC(:CHPh)CO-L-Phe-OR (R = H, Me) catalyzed by chiral Rh phosphine complexes gave Ac-L-Phe-L-Ala-OR or Ac-D-Phe-L-Ala-OR. The stereoselectivity depended on the Rh complex used.

IT 6737-42-4D, rhodium complex

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for asym. hydrogenation of dehydropeptides)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 55 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:110480 HCAPLUS

DOCUMENT NUMBER: 92:110480

ORIGINAL REFERENCE NO.: 92:18025a,18028a

TITLE: Homogeneous hydroformylation with carbon monoxide and water catalyzed by an octacarbonyldicobalt-1,2-bis(diphenylphosphino)ethane complex

AUTHOR(S): Murata, Kazuhisa; Matsuda, Akio; Bando, Kenichiro; Sugi, Yoshihiro

CORPORATE SOURCE: Natl. Chem. Lab. Ind., Tokyo, 153, Japan

SOURCE: Journal of the Chemical Society, Chemical Communications (1979), (18), 785-6

CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Catalytic solns. prepared from Co<sub>2</sub>(CO)<sub>8</sub>, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>PPh<sub>2</sub>, and H<sub>2</sub>O in an aprotic solvent (e.g., dioxane, THF) were effective for the hydroformylation of propene with CO and H<sub>2</sub>O. Typical conditions were 17 h in a steel bomb at 135° using 9 kg/cm<sup>2</sup> propene and 12 kg/cm<sup>2</sup> CO. Dioxane and THF were more suitable for the reaction than Et<sub>3</sub>N.

IT 6737-42-4D, complex with dicobalt octacarbonyl

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for hydroformylation of propene)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 56 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:5926 HCAPLUS  
DOCUMENT NUMBER: 90:5926  
ORIGINAL REFERENCE NO.: 90:1084h,1085a  
TITLE: Carboxylic acids and esters  
INVENTOR(S): Bartish, Charles M.  
PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
US 4102921	A	19780725	US 1977-791121	19770426
PRIORITY APPLN. INFO.:			US 1977-791121	A 19770426
AB	Carbonylation of alcs. is achieved in the presence of an IR catalyst containing a polydentate chelating P ligand. Thus, carbonylation of MeOH in the presence of di[1,2-bis(diphenylphosphino)ethane]carbonyliridium(I) chloride with 750 psig CO gave HOAc. Maximum rates are achieved with a P-Ir ratio of 1-2:1. Other phosphorus ligands used were bis(diphenylphosphino)methane, bis(diphenylphosphino)propane, and bis(diphenylphosphino)butane.			
IT	6737-42-4D, iridium complexes RL: CAT (Catalyst use); USES (Uses) (catalysts, for carbonylation of methanol)			
RN	6737-42-4 HCAPLUS			
CN	Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)			

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 57 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1978:563081 HCAPLUS  
DOCUMENT NUMBER: 89:163081  
ORIGINAL REFERENCE NO.: 89:25261a,25264a  
TITLE: Carboxylic acids and esters  
INVENTOR(S): Bartish, Charles Michael  
PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA  
SOURCE: Ger. Offen., 23 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
DE 2800986	A1	19780720	DE 1978-2800986	19780111
US 4102920	A	19780725	US 1977-759082	19770113
PRIORITY APPLN. INFO.:			US 1977-759082	A 19770113

AB ROH (R = C1-20 alkyl), RX (R = C1-20 alkyl, X = halo) and ROR or RCO<sub>2</sub>R (R = C1-19 alkyl) were carbonylated with CO in the presence of Rh complexes. Among the approx. 30 catalysts used for the carbonylation of MeOH to AcOH were Rh complexes with Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (n = 2-4), cis-Ph<sub>2</sub>PCH:CHPPh<sub>2</sub>, Ph<sub>2</sub>As(CH<sub>2</sub>)<sub>n</sub>AsPh<sub>2</sub> (n = 1, 2), and Ph<sub>2</sub>AsCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>.

IT 6737-42-4D, rhodium complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for carbonylation of methanol to acetic acid)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 58 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1973:135701 HCAPLUS

DOCUMENT NUMBER: 78:135701

ORIGINAL REFERENCE NO.: 78:21789a,21792a

TITLE: Unsaturated nitriles

INVENTOR(S): Albanese, Pietro; Benzoni, Luigi; Carnisio, Giuseppe; Crivelli, Armando

PATENT ASSIGNEE(S): Montecatini Edison S.p.A.

SOURCE: Ital., 15 pp.  
 CODEN: ITXXAX

DOCUMENT TYPE: Patent

LANGUAGE: Italian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	IT 869900		19700819	IT	19690812
AB	Mixts. of CH <sub>2</sub> :CHCHMeCN, MeCH:CHCH <sub>2</sub> CN, EtCH:CHCN, and cis- and trans-MeCH:CMeCN are obtained by the addition of HCN to butadiene in the presence of reaction products of Ni(CO) <sub>4</sub> and Ph <sub>2</sub> P(CH <sub>2</sub> ) <sub>n</sub> PPh <sub>2</sub> (I) (n is an integer of 0-12). The I-Ni(CO) <sub>4</sub> molar ratio is 1:1-10:1, the HCN-Ni(CO) <sub>4</sub> molar ratio is 10:1-100:1, and the reaction temperature is 50-200°.				
IT	6737-42-4D, Phosphine, 1,3-propanediylbis[diphenyl-, nickel complexes RL: CAT (Catalyst use); USES (Uses) (catalyst, for addition reaction of hydrocyanic acid with butadiene)				
RN	6737-42-4 HCAPLUS				
CN	Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)				

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 59 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:470863 HCAPLUS

DOCUMENT NUMBER: 75:70863

ORIGINAL REFERENCE NO.: 75:11187a,11190a

TITLE: Magnetic susceptibilities of some rhenium(III) and osmium(IV) halide complexes. Preparation of some new d<sub>4</sub> complexes

AUTHOR(S): Leigh, G. J.; Gunz, H. P.

CORPORATE SOURCE: Chem. Lab., Univ. Sussex, Brighton, UK

SOURCE: Journal of the Chemical Society [Section] A:  
 Inorganic, Physical, Theoretical (1971), (13), 2229-33

CODEN: JCSIAP; ISSN: 0022-4944

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A large range of complexes of Re(III) containing chloride or bromide, and tertiary phosphines or arsines as ligands, and also a few similar Os(IV) complexes have been prepared. Many have magnetic moments which are essentially the same in the solid state and in Cl<sub>2</sub>CHCl<sub>2</sub>CH solution. In addition several of the d<sup>4</sup> systems exhibit the anticipated temperature-independent paramagnetism in the solid state.

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, rhenium complexes

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 60 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:463170 HCAPLUS

DOCUMENT NUMBER: 75:63170

ORIGINAL REFERENCE NO.: 75:10007a,10010a

TITLE: 3-Pentenitrile from 2-methyl 3-butenitrile

INVENTOR(S): Pasquino, Pietro; Benzoni, Luigi; Carnisio, Giuseppe;  
Colombo, Luigi

PATENT ASSIGNEE(S): Montecatini Edison S.p.A.

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 2061660	A	19710624	DE 1970-2061660	19701215
NL 7017965	A	19710621	NL 1970-17965	19701209
GB 1285808	A	19720816	GB 1970-1285808	19701210
FR 2073605	A5	19711001	FR 1970-44682	19701211
US 3697578	A	19721010	US 1970-98908	19701216
ES 386504	A1	19730316	ES 1970-386504	19701216
JP 50001248	B	19750116	JP 1970-112561	19701217

PRIORITY APPLN. INFO.: IT 1969-25901 A 19691217

AB The title compound (I), useful as an intermediate for amines, dinitriles, and acids, was prepared in 39.7-79.5% yield by isomerization of CH<sub>2</sub>:CHCHMeCN (II) 15-150 min at 50-150° in the presence of [Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub>]Ni (III) (n = 3-5) in 1:100-1000 molar ratio. Thus, a mixture containing 10 g II and 0.25 g III (n = 4) was refluxed 1 hr at 128-39° to give a mixture of I 75.21, cis-MeCH:CMcCN 11.02, and trans-MeCH:CMcCN 7.08%.

IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, nickel complexes

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for rearrangement of methylbutene nitrile)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 61 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:414443 HCAPLUS

DOCUMENT NUMBER: 75:14443

ORIGINAL REFERENCE NO.: 75:2293a,2296a

TITLE: Reactions of cyanogen with transition metal complexes

AUTHOR(S): Bressan, Mario; Favero, G.; Corain, Benedetto; Turco, Aldo

CORPORATE SOURCE: Ist. Chim. Gen., Univ. Padova, Padua, Italy

SOURCE: Inorganic and Nuclear Chemistry Letters (1971), 7(2), 203-8

CODEN: INUCAF; ISSN: 0020-1650

DOCUMENT TYPE: Journal

LANGUAGE: English

AB  $\text{NiL}_2$  [ $\text{L} = \text{Ph}_2\text{P}(\text{CH}_2)_4\text{PPh}_2$ ] reacts with  $\text{C}_2\text{N}_2$  to give  $[\text{Ni}(\text{CN})_2\text{L}]_2$ ;  $\text{cis-M}(\text{CN})_2\text{L}_1$  ( $\text{L}_1 = \text{Ph}_2\text{P}(\text{CH}_2)_2\text{PPh}_2$ ,  $\text{M} = \text{Ni}, \text{Pd}$ ),  $[\text{Ni}(\text{CN})_2\text{L}_1]_2$  ( $\text{L}_2 = \text{Ph}_2\text{P}(\text{CH}_2)_3\text{PPh}_2$ ),  $\text{cis-Pd}(\text{CN})_2\text{L}_2$ , and  $\text{cis-Pt}(\text{CN})_2(\text{PPh}_3)_2$  were also prepared.  $\text{RhCl}(\text{PPh}_3)_3$  reacts slowly with  $\text{C}_2\text{N}_2$  to give  $\text{RhCl}(\text{C}_2\text{N}_2)\text{PPh}_3)_2$ .

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, transition metal complexes

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

L14 ANSWER 62 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:150520 HCAPLUS

DOCUMENT NUMBER: 74:150520

ORIGINAL REFERENCE NO.: 74:24273a,24276a

TITLE: Reactions of nickel(0) phosphino complexes with carbon monoxide

AUTHOR(S): Corain, Benedetto; Bressan, Mario; Favero, G.

CORPORATE SOURCE: Ist. Chim. Gen., Univ. Padova, Padua, Italy

SOURCE: Inorganic and Nuclear Chemistry Letters (1971), 7(2), 197-201

CODEN: INUCAF; ISSN: 0020-1650

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The ir spectral data of solns. after the reaction of  $\text{NiL}_2$  [ $\text{L} = \text{Ph}_2\text{P}(\text{CH}_2)_2\text{PPh}_2$  and  $\text{Ph}_2(\text{CH}_2)_3\text{PPh}_2$ ] with CO contain both the mono- and bis-substituted carbonyl complexes; for the reaction of  $\text{NiL}'_2$  ( $\text{L}' = \text{Ph}_2(\text{CH}_2)_4\text{PPh}_2$ ) with CO,  $\text{Ni}(\text{CO})(\text{L}')\text{L}'$  was isolated in which  $\text{L}'$  behaves as a monodentate and bidentate ligand.  $\text{Ni}(\text{CO})(\text{L}')\text{L}'$  reacts with CO to give  $\text{Ni}(\text{CO})_2\text{L}'$ .

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, nickel complexes

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

$\text{Ph}_2\text{P}-(\text{CH}_2)_3-\text{PPh}_2$

L14 ANSWER 63 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:124890 HCAPLUS  
DOCUMENT NUMBER: 74:124890  
ORIGINAL REFERENCE NO.: 74:20179a,20182a  
TITLE: Pentenenitriles  
INVENTOR(S): Albanese, Pietro; Benzoni, Luigi; Corain, Benedetto;  
Turco, Aldo  
PATENT ASSIGNEE(S): Montecatini Edison S.p.A.  
SOURCE: Ger. Offen., 9 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2009470	A	19710311	DE 1970-2009470	19700228
NL 7002580	A	19700907	NL 1970-2580	19700224
GB 1281465	A	19720712	GB 1970-1281465	19700225
FR 2033107	A5	19701127	FR 1970-6993	19700226
US 3686264	A	19720822	US 1970-15253	19700227
BE 746736	A	19700902	BE 1970-746736	19700302
ES 377044	A1	19730201	ES 1970-377044	19700302

PRIORITY APPLN. INFO.: IT 1969-13592 A 19690303

AB The title compds. were prepared by reaction of HCN with butadiene in C<sub>6</sub>H<sub>6</sub> at 100° in the presence of Ni[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub>]<sub>2</sub> (I) (n = 2, 3, or 4) as catalyst. Thus, heating a mixture containing C<sub>6</sub>H<sub>6</sub> 32.5, I (n = 4) 0.73, HCN 1.15, and butadiene 3.2 g 6 hr at 100° in an autoclave under argon gave 92% (with respect to converted HCN) MeCH:CHCH<sub>2</sub>CN and an isomer mixture containing 25% MeCH:CMcCN and 75% H<sub>2</sub>C:-CHCHMeCN.

IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, nickel complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for reaction of butadiene with hydrocyanic acid)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 64 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1971:112140 HCAPLUS  
DOCUMENT NUMBER: 74:112140  
ORIGINAL REFERENCE NO.: 74:18169a,18172a  
TITLE: Behavior of nickel (0) diphosphine complexes towards unsaturated organic compounds  
AUTHOR(S): Corain, Benedetto; Bressan, Mario; Rigo, Pierluigi  
CORPORATE SOURCE: Ist. Chim. Gen., Univ. Padova, Padua, Italy  
SOURCE: Journal of Organometallic Chemistry (1971), 28(1), 133-6  
CODEN: JORCAI; ISSN: 0022-328X  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The reactions of Ni(Dpb)<sub>2</sub> [Dpb = 1,4-bis(diphenylphosphino)-butane], and Ni(Dpp)<sub>2</sub> [Dpp = 1,3-bis(diphenylphosphino)-propane] with a variety of unsatd. organic compds. were investigated. Ni(Dpb)<sub>2</sub> is more reactive than Ni(Dpp)<sub>2</sub> and cyano-alkanes and alkynes are more reactive than alkenes under comparable exptl. conditions. A new complex, Ni(Dpb)[(NC)<sub>2</sub>C:-C(CN)<sub>2</sub>] was isolated and characterized. Catalytic properties of the Ni(0) complexes are described.

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, nickel  
complexes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 6737-42-4 HCAPLUS  
CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 65 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1970:455612 HCAPLUS  
DOCUMENT NUMBER: 73:55612  
ORIGINAL REFERENCE NO.: 73:9137a,9140a  
TITLE: Octatrienes and 1-ethoxy-2,6-octadiene  
INVENTOR(S): Yashida, Hisakatsu; Yuguchi, Sadao  
PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.  
SOURCE: Jpn. Tokkyo Koho, 2 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	JP 45009729	B4	19700408	JP	19650113
AB	CH <sub>2</sub> :CHCH:CH <sub>2</sub> (60 ml) and 0.1 g NaBH <sub>4</sub> were added to 0.5 millimole NiCl <sub>2</sub> .PPh <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> PPh <sub>2</sub> (I) in 20 ml EtOH. The mixture was heated at 90° for 23 hr to give 8.5 g mixture of 1,3,6-octatriene, 1,3,7-octatriene and vinylcyclohexene, b. 126-30°, and 2.2 g 1-ethoxy-2,6-octadiene, b <sub>31</sub> 90-1°. NiCl <sub>2</sub> .PPh <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> PPh <sub>2</sub> and NiCl <sub>2</sub> .PPh <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> PPh <sub>2</sub> were similarly used in place of I.				
IT	6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, nickel complexes RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)				
RN	6737-42-4 HCAPLUS				
CN	Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)				

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 66 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1970:434822 HCAPLUS  
DOCUMENT NUMBER: 73:34822  
ORIGINAL REFERENCE NO.: 73:5773a,5776a  
TITLE: β-Alkenyl-α,γ-dicarbonyl compounds  
INVENTOR(S): Takahashi, Kuniyuki; Hata, Go; Miyake, Akihisa  
PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.  
SOURCE: Ger. Offen., 70 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 1955664	A	19700506	DE 1969-1955664	19691105
DE 1955664	B2	19761202		
DE 1955664	C3	19770818		
NL 6916698	A	19700508	NL 1969-16698	19691105
FR 2022644	A5	19700731	FR 1969-38088	19691105
GB 1293549	A	19721018	GB 1969-1293549	19691105
CH 533590	A	19730330	CH 1969-16492	19691105
PRIORITY APPLN. INFO.:		JP 1968-80336	A	19681105

AB Title compds. were prepared by the reaction of a conjugated diene with an  $\alpha,\gamma$ -dicarbonyl compound in the presence of a Pd complex. The compds. may be useful as intermediates in the synthesis of perfumes and other products. Thus, 0.22 g Pd[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>PPh<sub>2</sub>]<sub>2</sub> (I) and 13 g AcCH<sub>2</sub>CO<sub>2</sub>Et (II) placed in a 100 ml autoclave and the atmospheric expelled with gaseous CH<sub>2</sub>:CHCH:CH<sub>2</sub> (III), 13 ml liquid III added, and the mixture heated 2 hr at 143-50° gave 2.1 g CH<sub>2</sub>:CHCHMeCHAcCO<sub>2</sub>Et (IV), b. 215°, n<sub>D</sub><sup>25</sup> 1.4372, and 2.7 g MeCH:CHCH<sub>2</sub>CHAcCO<sub>2</sub>Et (V), b. 220°, n<sub>D</sub><sup>25</sup> 1.4422. IV (11.8 g) and 14.7 g V were obtained by using 0.24 g PhOH and 26 g II in the above reaction. In all, 150 examples were given: aliphatic and cycloaliphatic compds. were prepared

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, palladium complexes

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 67 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1970:55584 HCAPLUS

DOCUMENT NUMBER: 72:55584

ORIGINAL REFERENCE NO.: 72:10189a,10192a

TITLE: Reactions of metal carbonyl derivatives. II.  
Ditertiary phosphine and arsine derivatives of  
tetracarbonyldi- $\pi$ -cyclopentadienyldiiron

AUTHOR(S): Haines, R. J.; Du Preez, A. L.

CORPORATE SOURCE: Res. Dep., South African Iron and Steel Ind. Corp.  
Ltd., Pretoria, S. Afr.

SOURCE: Journal of Organometallic Chemistry (1970), 21(1),  
181-93

CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The ditertiary phosphine and arsine ligands L = Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (n = 1, 2, 3), cis-Ph<sub>2</sub>PC<sub>2</sub>H<sub>2</sub>PPh<sub>2</sub>, Ph<sub>2</sub>PN<sub>2</sub>EtPPh<sub>2</sub> and Ph<sub>2</sub>As-(CH<sub>2</sub>)<sub>2</sub>nAsPh<sub>2</sub> (n = 1, 2) reacted with tetracarbonyldi- $\pi$ -cyclopentadienyldiiron in benzene when the solution is refluxed or irradiated with uv light at room temperature to afford derivs. of the type [ $\pi$ -C<sub>5</sub>H<sub>5</sub>Fe(CO)]<sub>2</sub>L. Analogous products are similarly obtained from the reactions of Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (n = 1, 2), cis-Ph<sub>2</sub>PC<sub>2</sub>-H<sub>2</sub>PPh<sub>2</sub> and Ph<sub>2</sub>PN(C<sub>2</sub>H<sub>5</sub>)PPh<sub>2</sub> with [ $\pi$ -MeC<sub>5</sub>H<sub>4</sub>Fe(CO)<sub>2</sub>]<sub>2</sub>. On the basis of ir spectroscopic evidence it is shown that the two terminal carbonyl groups in [ $\pi$ -RC<sub>5</sub>H<sub>4</sub>Fe(CO)<sub>2</sub>]<sub>2</sub> (R = H, Me) were replaced by these donor ligands and a structure for the new products is proposed. The ir and NMR spectra are discussed.

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, iron complexes

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 68 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1969:501275 HCAPLUS  
DOCUMENT NUMBER: 71:101275  
ORIGINAL REFERENCE NO.: 71:18841a,18844a  
TITLE: Preparation of 1,4-dienes  
PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.  
SOURCE: Fr., 9 pp.  
CODEN: FRXXAK  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1548453		19681206	FR	19670919
DE 1668727			DE	
GB 1183396			GB	
JP 44032768		19690000	JP	
US 3475509		19691028	US	19670915
PRIORITY APPLN. INFO.:			JP	19660919
			JP	19661003

AB Conjugated dienes are reacted with ethylene in the presence of a specific catalyst to obtain a mixture of the title compds. with some 1,5-dienes. The catalyst is prepared by reacting 11.9 g. powdered Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>P(Ph)<sub>2</sub>, 5.3 g. ferric acetylacetonate in 250 ml. dried and deaerated ether. To this, 15 ml. EtOAlEt<sub>2</sub> in 100 ml. ether is added dropwise while stirring. The addition took 2.5 hrs. Stirring is maintained at 0° 30 min. and at room temperature for an hr. to give 11.2 g. Fe[Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>P-Ph]<sub>2</sub>.CH<sub>2</sub>:CH<sub>2</sub>, m. 170°. The diene is then prepared by mixing 26 ml. butadiene and 0.44 g. of the catalyst in 10 ml. toluene. Then, 8 ml. Et<sub>2</sub>AlCl in toluene is also added at 0°. An 8 mole ratio of Et<sub>2</sub>AlCl to Fe catalyst is used. The whole mixture is heated 30 min. at 50° at a 40 kg. cm.<sup>-2</sup> ethylene pressure. There is obtained 21.2 g. 1,4-hexadiene and 0.7 g. residue. The catalyst was also prepared with propylene, 1-pentene and styrene. The best results are obtained with the 1-pentene catalyst which gave with a 99.33% yield a mixture containing 97.65% 1,4-diene.

IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, iron complexes  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts from chlorodiethylaluminum and, for addition reaction of butadiene with ethylene)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 69 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1968:456622 HCAPLUS  
DOCUMENT NUMBER: 69:56622  
ORIGINAL REFERENCE NO.: 69:10571a,10574a  
TITLE: Complexes of nickel(II) cyanide with ditertiary phosphines

AUTHOR(S): Rigo, P.; Corain, B.; Turco, A.  
 CORPORATE SOURCE: Univ. Padua, Padua, Italy  
 SOURCE: Inorganic Chemistry (1968), 7(8), 1623-6  
 CODEN: INOCAJ; ISSN: 0020-1669  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The preparation and characterization of the diamagnetic complexes of Ni(CN)<sub>2</sub> with the ditertiary phosphines Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (n = 2, 3, or 4) are reported. In contrast to the analogous complexes with the Ni halides, the complexes with Ni(CN)<sub>2</sub> contain not only chelating but also nonchelating and bridging diphosphines. The complexes are of the type Ni[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub>]<sub>m</sub>(CN)<sub>2</sub>, where m = 1, 1.5, or 2. The visible spectra show that the complexes with m = 1.5 or 2 are 5-coordinate. The 5-coordinate compound Ni[Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub>]PBu<sub>3</sub>(CN)<sub>2</sub> containing 1 ditertiary phosphine and one tertiary phosphine is also reported. The unusual composition of some of these complexes is attributed to the tendency of Ni(II) cyanide to coordinate 3 P atoms of trisubstituted phosphines.  
 IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, nickel complexes  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 70 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1968:440817 HCAPLUS  
 DOCUMENT NUMBER: 69:40817  
 ORIGINAL REFERENCE NO.: 69:7631a,7634a  
 TITLE: Five-coordinated low-spin complexes of cobalt(II) with tertiary and ditertiary phosphines  
 AUTHOR(S): Rigo, P.; Bressan, M.; Turco, A.  
 CORPORATE SOURCE: Univ. Padua, Padua, Italy  
 SOURCE: Inorganic Chemistry (1968), 7(7), 1460-3  
 CODEN: INOCAJ; ISSN: 0020-1669  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Co(PEt<sub>2</sub>Ph)<sub>2</sub>Cl<sub>2</sub> in a 1:1 EtOH-CH<sub>2</sub>Cl<sub>2</sub> solution was treated with PET<sub>2</sub>Ph and was passed through a column of an anionic resin in CN<sup>-</sup> form to give Co(PEt<sub>2</sub>Ph)<sub>3</sub>(CN)<sub>2</sub>. Also prepared were Co(PPh<sub>2</sub>Et)<sub>3</sub>(CN)<sub>2</sub>, CoL<sub>1.5</sub>X<sub>2</sub> (X = CN and NCS; L = 1,3-bis(diphenylphosphino)propane and 1,4-bis(diphenylphosphino)butane. The 5-coordinated Co(II) complexes are low spin compds. and were characterized by absorption and reflectance spectra.  
 IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, cobalt complex  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 71 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1968:432577 HCAPLUS  
 DOCUMENT NUMBER: 69:32577  
 ORIGINAL REFERENCE NO.: 69:6067a,6070a

TITLE: Complexes of nickel(II) cyanide with ditertiary phosphines and their reduction to nickel(I) derivatives

AUTHOR(S): Corain, B.; Bressan, M.; Rigo, P.; Turco, A.

CORPORATE SOURCE: Univ. Padova, Padua, Italy

SOURCE: Chemical Communications (London) (1968), (9), 509-10  
CODEN: CCOMA8; ISSN: 0009-241X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Complexes of Ni(I) of the composition NiL1.5CN [L = 1,4-bis(diphenylphosphino)propane or 1,4-bis(diphenylphosphino)butane] were obtained by the reduction of NiL1.5(CN)2 with NaBH4 suspended in EtOH. NiL1.5(CN)2 were obtained as red crystalline products by the addition of H2O to a solution of L in EtOH containing NiL(NCS)2 and KCN. The magnetic moments of NiL1.5CN are in the range 2.0-2.3 Bohr magnetons, as expected for a d9 configuration with a small orbital contribution. The complexes were characterized by ir, visible, and electronic reflectance spectra. The complexes NiL1.5CN are formulated as binuclear species [(NC)LNiLNiL(CN)] with a planar arrangement of 3 P atom and 1 CN group around the Ni atom.

IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, nickel complexes  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 72 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1968:59077 HCAPLUS

DOCUMENT NUMBER: 68:59077

ORIGINAL REFERENCE NO.: 68:11399a,11402a

TITLE: Hexadienes

PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.

SOURCE: Fr., 9 pp.  
CODEN: FRXXAK

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 1487354		19670707	FR 1966-58584	19660422
DE 1593574			DE	
GB 1131640			GB	
US 3548022		19701215	US	19660418
PRIORITY APPLN. INFO.:			JP	19650422
			JP	19651119

AB Hexadienes are prepared in high yield by the reaction of  $\alpha$ -olefins with conjugated diolefinic hydrocarbons in the presence of a catalyst comprising a cobalt hydridetertiary diphosphine complex and an organoaluminum compound, organic alc., or Friedel-Crafts catalyst. Thus, 110 cc. butadiene obtained by liquefaction and 1 cc. Et<sub>3</sub>Al were added to 20 cc. PhMe containing 0.5 millimole CoH(Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub> (I), the autoclave sealed, 35 kg./cm.<sup>2</sup> ethylene injected during 3 hrs. at 80-90°, and the distillate analyzed by gas-phase chromatog. to confirm the formation of 1,4-hexadiene 51.2, 2,4-hexadiene 0.6, butadiene dimer 2.7, and

high-boiling products 3.6 g. Similarly used as catalysts were the HClO<sub>4</sub> addition salt of I, I formed in situ by the reaction of CoCl<sub>2</sub>(Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub> with LiAlH<sub>4</sub> or NaBH<sub>4</sub>, or CoH(Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub> and Et<sub>2</sub>AlCl, EtOH, PhOH, p-chlorophenol, o-chlorophenol, p-cresol, 3,5-dimethylphenol, 2,4,5-trichlorophenol, Et<sub>3</sub>Al<sub>2</sub>Cl<sub>3</sub>, iso-Bu<sub>3</sub>Al, EtAlCl<sub>2</sub>, Et<sub>3</sub>Al-AlCl<sub>3</sub>, SnCl<sub>4</sub>, ZrCl<sub>4</sub>, WCl<sub>6</sub>, or BF<sub>3</sub>.Et<sub>2</sub>O. Solvents used in place of PhMe were PhCl, cyclohexane, EtOAc, tetrahydrofuran, and Et<sub>2</sub>O. Other monomers were prepared from other combinations of reactants, i.e. 2-methyl-1,4-hexadiene from butadiene and propylene and 4-methyl-1,4-hexadiene from isoprene and ethylene.

IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, cobalt complexes  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for addition reaction of conjugated diolefins with  
 $\alpha$ -olefins)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 73 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1967:90039 HCAPLUS

DOCUMENT NUMBER: 66:90039

ORIGINAL REFERENCE NO.: 66:16859a

TITLE: Ditertiary phosphine complexes of cobalt. Spectral, magnetic, and electron paramagnetic resonance studies  
 AUTHOR(S): Horrocks, William D., Jr.; Van Hecke, Gerald R.; Hall, Daniel DeWitt

CORPORATE SOURCE: Univ. Princeton, Princeton, NJ, USA

SOURCE: Inorganic Chemistry (1967), 6(4), 694-9

CODEN: INOCAJ; ISSN: 0020-1669

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ditertiary phosphine complexes of Co(II) of the type Co[(C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>P(C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>]<sub>m</sub>X<sub>2</sub>, where n = 3, m = 1 and X = Cl, Br, I and n = 2, m = 1, 2, and X = Cl, Br, I, were prepared and studied by spectral and magnetic means. Evidence is presented to show that the high-spin monochelate compds. with m = 1 and n = 2, 3 involve "tetrahedral" coordination. The E.P.R. signals of the low-spin dichelate Co[(C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>P(CH<sub>2</sub>)<sub>2</sub>P(C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>]<sub>2</sub>X<sub>2</sub> complexes recorded on polycrystg. samples show 3 g values. A satisfactory correlation between the measured electronic spectral, magnetic, and E.P.R. data is found. The electronic ground state is |(xy)(-xy)(x<sup>2</sup> - y<sup>2</sup>)| (vacancy configuration). The energies of the 1-electron d orbitals were estimated by using the observed optical data and the interelectronic interaction energies calculated for the low-spin d<sup>7</sup> system. 19 references.

IT 6737-42-4D, Phosphine, trimethylenebis[diphenyl-, cobalt complexes  
 RL: PRP (Properties)  
 (E.S.R., magnetic moment and spectrum of)

RN 6737-42-4 HCAPLUS

CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

L14 ANSWER 74 OF 74 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1967:76129 HCAPLUS

DOCUMENT NUMBER: 66:76129

ORIGINAL REFERENCE NO.: 66:14295a  
 TITLE: Mono and dinuclear carbonyl complexes of molybdenum  
 with  $\alpha,\omega$ -bis(diphenylphosphino) alkanes  
 AUTHOR(S): Dietsche, W. H.  
 CORPORATE SOURCE: Shell Grundlagenforschung G.m.b.H., Schloss  
 Birlinghoven, Germany  
 SOURCE: Tetrahedron Letters (1966), (49), 6187-91  
 CODEN: TELEAY; ISSN: 0040-4039  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 GI For diagram(s), see printed CA Issue.  
 AB Mo(CO)<sub>6</sub> and 0.5 molar equivalent Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>n</sub>PPh<sub>2</sub> (I, n = 2,3,4,5,6,8) in  
 (HOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>O (II), (MeOCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>O (III), or EtOCH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OH (IV)  
 refluxed 5-20 min. with evolution of the calculated amount of CO and the cooled  
 mixture diluted with MeOH gave the mono-nuclear complexes V [n, m.p.  
 (decomposition), solvent, temperature, and % yield, given]: 2, 191-3°, IV  
 (III), 202° (160°), 77.6 (60.1); 3, 187-91°, II (IV),  
 245° (202°), 10.7 (23.6); 4, 177-80°, II,  
 245°, 53.6; and dinuclear complex VI (same data given): 4,  
 157-60°, IV (III), 202° (160°), 22.3 (55.5); 5,  
 139-42°, IV (III), 202° (160°), 30.2 (27.4); 6,  
 180-5°, IV, 202°, 64.5; 8, 173-5°, IV, 202°,  
 82.4. With the given ratio of starting materials only mononuclear 1:1  
 complexes V were isolated when n < 4. For n > 4 only dinuclear 1:2  
 complexes VI were formed. The complexes were stable in air and became  
 blue-green in intense sunlight. VI different from V in the intensive  
 short wave CO stretching band which was identical with that of  
 Ph<sub>3</sub>P.Mo(CO)<sub>5</sub> at  $\nu$  2074 cm.<sup>-1</sup> (CCl<sub>4</sub>). V must have cis configuration of  
 the biphosphine since they show the same CO band as cis-(Ph<sub>3</sub>P)<sub>2</sub>Mo(CO)<sub>4</sub>.  
 IT 6737-42-4DP, Phosphine, trimethylenebis[diphenyl-, molybdenum  
 complex  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 6737-42-4 HCAPLUS  
 CN Phosphine, 1,1'-(1,3-propanediyl)bis[1,1-diphenyl- (CA INDEX NAME)

Ph<sub>2</sub>P-(CH<sub>2</sub>)<sub>3</sub>-PPh<sub>2</sub>

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